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Proceedings of the International Webinar on Longterm Social Impacts of the Covid-19 Pandemic

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Long-term Social Impacts of the Covid-19 Pandemic

Proceedings of the International Webinar held from 22-24 February 2022

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Preface

The International Webinar on the "Long-Term Social Impacts of the Covid-19 Pandemic" was organized by the National Academy of Sciences of Sri Lanka (NASSL) from 22-24 February 2022, with funding from the Association of Academies and Societies of Sciences in Asia (AASSA) and the InterAcademy Partnership (IAP). It is estimated that about 400 million persons were infected with Covid-19, with over 5.5 million deaths at the time of the webinar, and that the global economy contracted by 3.5 percent in 2020 as well. However, the focus of the webinar was intended to be on the possible *long-term social impacts* of the pandemic. We sought to explore areas such as Economics, Politics & Governance, Culture & Human Behaviour, Religion, Education, and Science.

The original intention was to feature only keynote and lead speakers. However, we thought that grassroots insights from contributed papers would also be useful, and called for abstracts on the above themes. Close to 130 abstracts were submitted, of which 25 were chosen for full paper publication and presentation. This volume comprises extended abstracts from the keynote and lead speakers, and full papers from the thematic contributions (or abstracts if full papers were not available).

This compilation is also enhanced by the inclusion of a Webinar Statement, contributed to by all keynote and lead speakers, and webinar chairs and resource persons from NASSL.

The webinar attracted 404 registrants from 31 countries. Attendance itself ranged from 137 on the first day to 81 on the last. Recordings of webinar proceedings and separate recordings of the keynote and lead speakers can be found at the webinar web page https://www.covid-impact.nassl.org. Featured on this web page are also short 6–8 minute videos of the subject matter presented by six of the keynote and lead speakers.

We thank all the keynote and lead speakers, those who contributed thematic papers, and indeed all who participated at the webinar. My special thanks are due to Professor C M Madduma Bandara, one of our fellows, who formulated the concept for the webinar; and also to fellow academicians Professor Nadira Karunaweera, Professor Tudor Silva and Dr Ranjith Mahindapala who served on the steering committee and chaired the sessions.

Professor Priyan Dias, President, National Academy of Sciences of Sri Lanka July 2022

Webinar statement

The National Academy of Sciences of Sri Lanka Long-Term Social Impacts of the Covid-19 Pandemic



Statement

The International Webinar on the "Long-Term Social Impacts of the Covid-19 Pandemic", organized by the National Academy of Sciences of Sri Lanka from 22-24 February 2022, sought to explore the social dimensions of the Covid-19 pandemic, while focusing on its possible long-term impacts.

Key Observations from the Webinar

The following is a summary of observations from the keynote and lead papers, as well as from thematic papers presented at the webinar:

- Although it is estimated that about 400 million persons were infected, with over 5.5 million
 deaths at the time of the webinar, the death toll is likely to be much more. The global
 economy contracted by 3.5 per cent in 2020, which is about 3 trillion US Dollars of lost output.
- Where the future is concerned, the pandemic could (i) gradually become endemic with reduced virulence; or (ii) take a seasonal pattern like a flu, with updates of vaccine composition required periodically; or (iii) evolve further, with more or less virulence, with immune escape continuing for a longer time; or in the worst case (iv) evolve further, rendering counter measures ineffective or difficult and thus continue for a long time.
- The pandemic also brought to the fore the volatility of national economies and inequity between the rich and poor countries in terms of disease management, including vaccination, and social support. Despite the rapid strides made in tackling the outbreak, it is increasingly evident that its social, economic and cultural impacts will be deep, wide-ranging, and enduring.
- Prevailing inequalities in society, including that of gender, emerged more glaringly in many
 poorer countries due to the pandemic. Comprehensive and universal social protection
 systems, when in place, tend to play a lasting role in creating resilience against the pandemic.
 They help in the fight against aggravated poverty, inequality, and deprivations of various
 forms; and thus, enhance capacity to deal with shocks. Increased tension between societal and
 individual needs and preferences was evident in many sectors, particularly in education and
 health care delivery.
- Education was one of the worst affected; some 1.6 billion children were estimated to be out
 of school during the pandemic. On a positive note, infections in children were less. However,
 the high level of learning loss will have a major long-term impact. Furthermore, many children
 are at risk of not resuming school. Cross-sectoral approaches will be needed to ensure that the
 most marginalized are reached.
- Global health and humanitarian response has largely overlooked the role that religions could play in the wellbeing of people, particularly the poorer segments; with international organizations basing their approach to health only upon 'modern', 'scientific' and 'secular' principles.

- The pandemic has challenged the health systems' capacity and coordination as never before, demanding more innovative models of governance. *De facto* increases in the role of governments in epidemic control tended to erode the normal functioning of democratic institutions in some countries, and even resulted in the use of security forces in some cases, leading to conflicts and coordination challenges between agencies.
- The crucial importance of the public's trust in governing authorities, for managing both the epidemic and the 'infodemic' was highlighted. The potential of local communities both to foster such trust and to mobilize social services was also brought out.
- The need for and potential of the greater use of foresight analysis was also demonstrated, through the example of an exercise carried out in relation to the pandemic.
- The pandemic had demonstrated why science-informed political leadership is critically
 important in times of disaster and despair, including management of misinformation, need for
 real-time data for decision-making, and developing more adaptable, responsive and equitable
 health systems in the future.

Notwithstanding the predominantly negative impacts, the conference noted a number of opportunities, as follows:

- There is some evidence that upheavals can be catalysts to rebuild society in new ways using the opportunities presented.
- For example, technology has demonstrated how greater numbers of children and even adults can potentially access knowledge more effectively in future.
- The extraordinary challenge of delivery and coordination of public health posed by the pandemic has presented opportunities for re-conceptualizing health systems and strengthening research on some outstanding issues, especially the financing and organization of public health functions.
- The pandemic provided a 'teaching opportunity' on how human society would be able in future to tackle global crises such as climate change and environmental degradation.
- The pandemic has also demonstrated the realities of losers, who are merely treated with sympathy, and winners, who amassed substantial wealth and power by capitalizing on the disaster. Possibilities can be envisaged on how the latter can be brought to support the former more equitably.
- The conference also noted that in the past, although advance alerts and evidence-based advice about impending pandemics have been given from time to time to governments, they have hardly been heeded; this presents opportunities for developing common modalities and effective strategies for providing advice to governments from learned groups of persons.
- The pandemic presented opportunities to examine scientifically based foresight analysis and scenario development in future pandemics. The evidence on current and likely future epidemiological patterns of Covid can be used both to diversify scientific inquiry and also to generate scenarios for further foresight analysis.
- The pandemic also provided an opportunity to integrate allopathic and proven traditional systems of health care, supplemented with traditional cultural, religious, spiritual, and psychosocial support for the wellbeing of people. The role of symbolic objects and actions for mobilizing society towards desirable ends should also be recognized.

The Future

The Conference deliberations provided evidence to formulate some future actions, as summarised below:

- (a) There is a case for setting up a 'Global Commission on Covid-19', capable of probing into and reporting on the multi-facetted and inter sectoral dimensions of the pandemic, encompassing economic, political, cultural, and social dimensions, to provide a better coordinated response in the time of a pandemic.
- (b) Based on the lessons from the Covid pandemic, global initiatives should be launched on promoting comprehensive foresight analyses to charter paths for the future in handling possible pandemics.
- (c) Protocols for integrating all spheres of sciences, inclusive of the social sciences, in a coordinated approach for policy level decision-making for solutions to pandemics are needed, both at national and international levels. The appropriate leveraging of decentralized and community-based approaches should also be considered; perhaps building on the five areas identified in the Social Sciences and Humanities 7 COVID-19 Recovery statement: community engagement; education, skills and employment; trust, transparency and data gathering; inequalities and cohesion; and fiscal policy and recovery.
- (d) From the experiences gathered, it is also opportune to reexamine public health delivery systems in a time of pandemic. A 'One Health' approach to public health policy may be warranted one that integrates the well-being of humans, animals and the environment. The nexus between health and security needs to be negotiated, in a way that safeguards and promotes equity.
- (e) Given the serious setback to educational systems, action is needed on remediation, including lesson delivery, reviewing curricula, formative assessment, and a transformation of pedagogy. In the longer term it has been demonstrated that technology can transform education systems and also address the digital divide, if equity is prioritized as a policy goal going forward.
- (f) Recovery will require vision and interconnectivity between policymakers at local, regional, national, and international levels. Pandemics and other crises can lead to change, but such situations must be actively seized to bring about novel business models, inclusive of decisions regarding desired levels of agility and national self-reliance. In addition, lessons from the pandemic must be used to better manage the balance between 'lives and livelihoods' or between health and the economy in future episodes of this sort.

This statement is based, inter alia, on contributions from Prof. Dominic Abrams (University of Kent), Prof. Virendra Kumar Malhotra (Indian Council of Social Science Research), Prof. Malik Peiris (University of Hong Kong), Prof. Dame Anne Mills (London School of Hygiene and Tropical Medicine), Dr Jim Ackers (UNICEF), Prof. Rahul Mukherji (Heidelberg University), Prof. H.M. Gunatilake (formerly ADB), Prof. Emma Tomalin (University of Leeds), Dr Melvin Jabar (De La Salle University), Prof. Vivian Kwang-wen Lin (University of Hong Kong), Dr Upali Sedere (Ministry of Education Reforms, Sri Lanka), Dr Palitha Abeykoon (WHO envoy), Ms Hanaa Singer-Hamdy (UNO); and also from Prof. C.M. Madduma Bandara, Prof. Tudor Silva, Prof. Nadira Karunaweera, Dr Ranjith Mahindapala and Prof. Priyan Dias (all from the National Academy of Sciences of Sri Lanka). We acknowledge funding from the Inter Academy Partnership (IAP) through the Association of Academies and Societies of Science in Asia (AASSA).

25 March 2022.



Societal Implications of COVID-19 – The UK and Beyond¹

Dominic Abrams²

In September 2020, the British Academy – the national body for the humanities and social sciences in the United Kingdom – was asked by the Government's Chief Scientific Advisor, Sir Patrick Vallance, to conduct an independent, comprehensive and multidisciplinary review³ of the long-term societal impacts of COVID-19. Some of the key findings and stark conclusions will be shared in the presentation, and we will focus on the implications both for the UK and globally.

Despite the strides made in tackling the pandemic, the social, economic and cultural impacts will be wide, deep and enduring. The effects will emerge differently across places, have differential impacts for individuals, communities, regions, and nations, and will play out along different time courses. These elements of place, scale and time are not to be overlooked. The British Academy's evidence reviews⁴ in the UK shed light on the range and forms of impacts that the pandemic can have, albeit in a relatively wealthy and geographically compact country with relatively few major challenges in terms of climate or disease.

The quality and volume of evidence does, however, shed light on the kinds of effects that will be happening elsewhere, with quite possibly even more serious impacts. Different countries have tackled the spread of COVID-19 in different ways, but many have relied heavily on testing, vaccinating, treatments and controls over public behaviour to drive down cases and hospitalisations. There are of course many direct and immediate impacts from lockdowns on lives and livelihoods resulting from reduced economic activity (generally and in particular for some sectors) and limits on the ability to see family and friends, travel or take part in leisure activities. While some of these immediate effects ease with the relaxation of restrictions, the set of deeper impacts on health and wellbeing, inequalities and cohesion, community engagement, education systems, skills, and employment⁵, the economy⁶ and fiscal policy, and wider perceptions of trust and transparency⁷, are more complex and likely to have longer term and generational effects.

Beyond short term practical and economic effects, and beyond mortality rates, we must attend to ways that the pandemic will continue to shape our futures. Given the disparate and often nationally focused variations in the distribution of vaccines and the flexing of behavioural restrictions, there are likely to be continuing reverberations, ricochets and recurrences of infection and attempts at mitigation. Consequently the societal, cultural and economic ramifications across the whole world.

A globally equitable response is key to making an effective contribution to the challenges of the pandemic in every country, such as in supporting enhanced vaccination rates, as otherwise a large viral reservoir will be maintained, where the virus can mutate. The achievement of global

¹ In addition to the work and research of the author, this presentation also draws on the British Academy's **COVID Decade** reports (COVID-19 and Society: Shaping the COVID Decade | The British Academy), and the Academy's statements from the representative bodies of social sciences and humanities in the **G7** -- **SSH7** statements (SSH7 Overview | The British Academy).

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³ COVID-19 and Society: Shaping the COVID Decade | The British Academy

⁴ The COVID Decade: understanding the long-term societal impacts of COVID-19 | The British Academy

⁵ Education, Skills and Employment | The British Academy

⁶ Fiscal Policy | The British Academy

⁷ Trust, Transparency and Data Gathering | The British Academy

protection requires cooperation not only medically but also economically and politically. In particular, containing this pandemic and managing future pandemics depends not only on our medical capacity to combat and prevent infection, but also our capacity to mobilise cooperative and mutually supportive behaviour across communities, countries and globally.

The pandemic therefore exposes vulnerabilities in our ability to cooperate effectively – vulnerabilities in education, communication, resources, political trust, community resilience, adaptability and in the functioning of our systems of governance. More encouragingly, the pandemic also exposes, untapped capacities, latent resources and opportunities for progressive change, and therefore provides a chance to develop more forward thinking and longer term approaches to building a safe and sustainable future.

History has shown us that pandemics are just as much social and economic crises as they are medical and health ones. Effects of structural and geographical inequalities in society are generally magnified, and new ones also created. In this pandemic there has been lost and likely unrecoverable access to education and pressures on revenue streams. History also reminds us that times of upheaval can be catalysts to rebuild society in new ways. For example, in this pandemic we have seen the importance of local communities in getting through the worst effects. How we support the opportunities and tackle the challenges is a pressing question, requiring coordinated effort, locally, nationally, regionally and internationally, to overcome. To respond to the impacts and respond to demands, new or otherwise, we need integrated approaches, integrated analyses, and integrated solutions.

As set out in the recent set of statements⁸ on resilience and recovery from the COVID-19 pandemic from Social Sciences and Humanities Representative Bodies of the G7, recovery will require vision and interconnectivity between policymakers at local, regional, national and international levels. Pandemics and other crises can lead to change, but we must actively seize the moment and the opportunity. The statements reinforce the conclusions that we must focus on addressing the following:

- Community engagement⁹: Focusing on how context specific to place, culture, social and economic factors, shape people's responses to COVID-19.
- Education, skills and employment¹⁰: Focusing on responses in and beyond the pandemic for education, work and employment;
- Trust, transparency and data gathering¹¹: Focusing how COVID-19 has affected society's relationships with information, data, the media and the role of experts;
- Inequalities and Cohesion¹²: Focusing on how COVID-19 has affected and highlighted inequalities and relationships between communities of people, and senses of community and belonging.
- Fiscal policy and recovery¹³: Focusing on how economies and societies can collectively harness their fiscal resources to respond to the challenges posed by the pandemic.

We conclude by reflecting on current political conditions in the UK and more broadly, and on what progress we may be making on some of these challenges.

⁸ SSH7 Overview | The British Academy

⁹ Community Engagement | The British Academy

¹⁰ Education, Skills and Employment | The British Academy

¹¹ Trust, Transparency and Data Gathering | The British Academy

¹² Inequalities and Cohesion | The British Academy

¹³ Fiscal Policy | The British Academy

Social Protection in India during COVID 19 Pandemic

V K Malhotra¹

Conventionally, social protection has been used in the context of welfare state and the policies to ensure a certain standard of living and thus, address the issue of poverty. Government supported welfare became visible in 19th and 20th centuries when Germany and Britain started insurance for the working class. The United States provided emergency relief during the period of Great Depression. Now, social protection envelops a much greater range of issues and objectives. It has become part of the policy of both - developed as well as developing nations to address the issues of poverty, inequality, imbalances and other sufferings in terms of illiteracy, ill-health and lack of balanced diet.

The term has gained further significance during the COVID 19 times to provide protection to the vulnerable populations in this extreme contingency. Social protection is very much a preferred instrument of the Sustainable Development Goals (SDGs).

Globally, governments have responded to the emergency needs of people by introducing various social protection measures during the Covid19 pandemic. Governments have provided the necessary support to the health sector, firms, workers and households to cope up with the negative socio-economic impacts of the pandemic. Worldwide, governments announced fiscal stimulus totalling USD16 trillion in the very first year of the pandemic.

Social protection has always been part of India's progressive policies and many flagship programmes and schemes were launched with a greater focus on improving access to food, housing, employment, education, skills development and other income enhancing policies like Mid-day Meals, Housing Programme (IAY) for rural areas, Swarna Jayanti Grameen Swarojgar Yojana (SGSY), Prime Minister Employment Generation Programme (PMEGP), Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), Pradhan Mantri Jan Dhan Yojana, Rural Roads connectivity, Public Distribution System, Pradhan Mantri Ujjwala Yojana, Antyodaya Anna Yojana etc.

Apart from these, the Government of India announced special relief packages of social protection during the pandemic like economic stimulus package of \$\tilde{1}20\$ lakh crore, free vaccination programme, employment scheme for migrant workers - 'Garib Kalyan Rozgar Abhiyaan', creation of emergency healthcare facilities for COVID treatment and so on. Besides, the government has also provided assistance to the neighbouring countries to meet their objective of social protection. An INR 22.5 billion relief package was announced, including insurance for the frontline health workers, an increase in coverage and entitlement. The Government of India took proactive action to prevent new infections, provide treatment, economic relief, and delivery of basic services and essential commodities. During the nationwide lockdown, about 41 LMT food grains were distributed each month, covering more than nearly 740 million beneficiaries.

While estimates of the impact of Covid19 on global poverty continue to be adjusted and estimated as the crisis still continues without any perfect conjecture of its dying down, the social protection instruments have been and will be very helpful in keeping the extent of poverty, inequality and pandemic caused risks under some manageable limits in the medium

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and long terms. Comprehensive and universal social protection systems, when in place, play a much more lasting role in helping resilience to grow at an early stage and help in the fight against aggravated poverty, inequality and deprivations of various forms and thus, enhance capacity to deal with such shocks.

COVID-19: Lessons for Global Public Health

Malik Peiris1

COVID-19 has been tragedy for human and economic well-being. Although the WHO confirmed case numbers and death toll are presently around 376 million cases and 5.2 million deaths world-wide, it is estimated that real death-toll is well over 15 million. Just between April and June 2020, the International Labour Organization estimated that an equivalent of 400 million full-time jobs were lost across the world and the overall impact of the pandemic has been estimated to be in the order of US\$ 82 trillion, over a five-year time frame. However, we have to accept that this will not be the last pandemic of the 21st Century nor can we assume that future pandemics may not be substantially more severe. It is therefore essential that we learn the lessons from this pandemic so we are better prepared to respond to future events. COVID-19 emerged from viruses in wild animals (i.e. bats) crossing species to transmit in humans. A number of such events have occurred over the past 30 years including avian flu H5N1, SARS, MERS, Zika, Ebola and the 2009 H1N1 pandemic (that emerged from swine), but only COVID-19 and H1N1 became true pandemics. The factors that predispose to emergence of such novel viral infections are largely man-made, i.e. intensive livestock production and trade, trade in wild animals for food and the pet trade, human population grown and urbanization, international travel, ecological degradation and climate change.

Understanding the pathways of viral spill-over can provide options to reduce risk. For example, SARS in 2003 emerged from the wild game animal markets in Southern China. Stopping that trade will not only prevent emerging viral infections (may have in fact have prevented emergence of COVID-19) but also reduce ecological degradation and extinction of species. This requires a "One Health" and "Planetary Health" perspective where the health of the planet is assessed in terms of its equitability and sustainability, approaches that also will serve to mitigate the other major global challenges of climate change, bio-diversity loss and environmental pollution. We also need to enhance investments in developing countermeasures against future novel zoonotic and pandemic threats. This requires governmental investment, as Pharma cannot be expected to invest in research to develop counter-measures to viruses that may or may not become pandemic. CEPI (Coalition of Epidemic Preparedness Innovations) has provided a proof-of principle of how such an initiative may contribute to developing vaccines, but also, through the COVAX initiative, shown how such vaccines can be made available globally. The pandemic has illustrated why science-based political leadership is critically important. It has also highlighted the impact of misinformation that now spreads via virtual-space even faster than the virus. We need to better understand how to counter such threats, not just for pandemic response but in order that we may be able to better respond to the other global challenges that confront us. The COVID-19 pandemic should provide us with a "teaching opportunity" of the urgent need to confront the even greater challenges we face, i.e. those from climate change, biodegradation and environmental pollution.

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Adaptable, Responsive and Equitable Health Systems

Dame Anne Mills1

The term 'health systems' has come into common use in recent years, both as a way of describing a set of organisational arrangements critical to ensuring good health, and also as an important area of research. But many consider the term 'health systems' to be a confusing and vague concept. Here I briefly explain the health system and health system goals, and how the financing and organisation of health systems vary across the world. I then consider the health systems impact of Covid-19, before reviewing how countries have responded, and what the future shape of a health system might be, post Covid-19.

WHO defines a health system as 'all organisations, institutions and resources that produce actions whose primary purpose is to improve health' (WHO 2000). Health systems are examples of "complex" systems, where the overall system contains numerous subsystems, each with its own characteristics, meaning that the outcome of various interacting subsystems is unpredictable (Adam & De Savigny, 2012). Conventionally included in a health system would be primary, secondary and tertiary care, rehabilitation, health promotion and prevention services, and broader public health activities such as communicable disease surveillance. Conventionally excluded would be sectors and services where health improvement is a secondary benefit, not a primary purpose, such as education and water and sanitation.

Various goals have been defined for health systems; those from WHO (2000) are good health (absolute level and distribution), fairness in financial contributions, and responsiveness to people's expectations (in level and distribution). In recent years Universal Health Coverage (UHC), defined as meaning that all individuals and communities should receive the health services they need without suffering financial hardship, has been adopted as the means for meeting these goals, as reflected in the UHC target in the Sustainable Development Goals.

Successive global waves of infectious disease, from SARS in 2003 to now COVID-19, have led to emphasis also on Global Health Security – the activities needed to minimise the risk and impact of acute public health events that endanger health across geographical boundaries. Given the disruption caused by epidemics and pandemics, the concept of health systems that are adaptable, or resilient, has been emphasised. Resilience can be seen as the capacity of health actors, institutions, and populations to prepare for and effectively respond to crises; maintain core functions when a crisis hits; and, informed by lessons learned during the crisis, reorganise if conditions require it (Kruk et al 2015). In addition 'everyday resilience' – in the face of routine, multiple challenges – is important in the context of weak and under-financed health systems (Gilson et al 2016).

Health systems provide the functions of financing (revenue collection, pooling and purchasing), service provision, resource generation (e.g. human resources, physical capital, pharmaceuticals) and stewardship (including regulation) (WHO 2000). While health systems can be described in terms of resource flows and relationships between organisations, individuals and households (Mills et al 2018), it is also important to recognise that in the context of any particular country, health systems are complex social institutions, with various sets of relationships (e.g. patient- provider, patient- government, provider- government) and in some regions, such as Europe, embodying the important concept of social solidarity.

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Health systems vary hugely across the world, in terms of absolute levels of funding, sources of funding, extent to which funding is pooled across individuals or spent directly out-of-pocket, and how the provision of health services is organised – via what mix of public and private providers. While health technologies are available globally, they are not equally available in countries, whether because they cannot be afforded (by governments or households), or the professional expertise is not locally available to make use of them. Given that health care is a universal need, the outcome is huge disparities in health levels, and access to care, within and between countries. In general, the poorer the country, the lower is health system funding, the higher the share of funding that is paid by households out-of-pocket, and the more fragmented and unregulated is service delivery. Vice versa, the richer the country, the higher the share of pooled and mandated funding, the larger the share of funding that is pooled and strategically allocated to meet health needs, and the more organised is service delivery.

This sets the scene for considering the impact of Covid-19 on health systems across the world. All countries have faced a similar disease threat, but their capacity to respond has been strongly influenced by their pre-existing health system strengths and weaknesses. The differences in the ability of countries to respond is shown most sharply in vaccine coverage: as at Feb 10, 2022, 11% of the population in low-income countries had received at least one dose, whereas in high and upper-middle income countries this share was 78%². But at a more general level, no country can claim to have met the aspiration of an adaptable, responsive and equitable health system when faced with the challenge of Covid-19.

In general terms, the impact of COVID-19 is summarised below, distinguishing impact on population and patients, service providers, pooling and purchasing agencies, and governments and professional bodies. Comprehensive information is still accumulating, so there is an inevitable degree of uncertainty on the precise impacts.

The impact on the population and patients is likely to include:

- Increased health needs arising from increased poverty due to reduction in economic activity
- Reduced access to care resulting from changed population distribution as a result of work-at-home requirements and unemployment
- Reluctance to seek care due to fear of exposure to Covid-19 or concerns of service availability
- Worsened health inequalities due to differential impact of Covid-19 and economic recession on different groups
- Increased needs due both to Covid-19 (long Covid; mental health) and non-Covid unmet needs.

The impact on service providers is likely to include:

- Death/illness/burnout related to Covid-19
- Balance of provision pivoted to Covid-19; reduced ability to provide other services (e.g. maternal/child health, other infectious diseases, non-communicable diseases): for example, across 20 countries health care utilisation decreased by an overall median of 37% (Moynihan et al 2020)
- Accelerated online provision of professional services and self-monitoring
- Accelerated growth of health care as consumer product (e.g. home testing)
- Increase in sales of commercial online providers e.g. e-pharmacy, advice
- Increased online training and education.

https://www.nytimes.com/interactive/2021/world/Covid-vaccinations-tracker.html

The impact on pooling and purchasing agencies is likely to include:

- Reduced coverage of pooling arrangements as a result of increased informalisation of employment
- Enforced change in health care priorities
- Backlog of non Covid-19 treatments
- Adapting to a more diverse provider market and new entrants
- New challenges in combatting disinformation on health care products, especially vaccines and treatments.

And the impact on government and professional bodies is likely to include:

- A huge cost burden of the Covid-19 response related to surveillance, testing, treatment and vaccination
- *De facto* an increased role of government
- Conflicts/ coordination difficulties between agencies and levels of government
- Decision-making difficulties due to lack of real time data for decision-making
- Increased tension between societal and individual needs and preferences.

Covid-19 has brought an unprecedented focus on public health - surveillance, case finding, influencing health behaviours, vaccination – and on the relationship between central government and local government responsibilities. The health systems literature, although in theory encompassing the sub-system of public health, in practice is dominated by concerns of the personal health services which consume most of the health system budget, especially secondary and tertiary hospitals, and to a lesser extent primary care services. Scant literature that is available on the delivery of public health functions indicates both how much they vary across countries (Rechel et al 2018), and how complex is a local public health system in terms of various agencies and functions (CDC 2017).

Covid-19 has challenged health system capacity and coordination as never before, and has been superimposed on health systems already struggling to cope. But it provides the opportunity to reconceptualise health systems and strengthen research on neglected issues, especially the financing and organisation of public health functions. All countries need to reflect on how they govern, finance and provide essential public health functions in order to shape a more adaptable, responsive and equitable health system in the future.

What might health systems look like in a post-Covid-19 world, and taking into account pre-existing trends? They are likely to be more decentralised, with more initiative in the hands of communities, households and patients. The provider market is likely to be more diverse, with greater participation of private sector entities directly interacting with clients (not via a professional gateway). There will be much greater availability and use of online advice, monitoring and support to maintain healthy lifestyles and manage chronic disease. Governments and professional bodies (eg medical, nursing associations) will likely struggle to regulate and coordinate this market, the more so outside high income countries where capacity to regulate is greater. Governments will focus especially on effective early warning, surveillance and management of infectious disease via coordinated global, national and local agencies, backed by standing research capacity. Social, cultural and political preferences will continue to shape government responses.

These developments are not purely driven by Covid-19, but Covid has accentuated the speed of change.

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Long Term Social Impacts of the Covid Pandemic on Education in South Asia

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This paper takes a regional perspective, but also draws on growing global evidence and work carried out in Indonesia itself. The paper draws on global evidence and a growing body of evidence from the region, not least studies carried out by UNICEF and other partners, including government and UNESCO.

The paper notes that the COVID-19 pandemic has impacted very significantly on children's education in the region causing high levels of learning loss in the short and medium terms. It cautions that this learning loss could have a long term impact and we could see a lost generation if governments and development agencies like UNICEF do not rally around the need for a systematic approach to remediation, including reviewed curricula, formative assessment and a transformation of pedagogy with teachers becoming more like facilitators of learning, which is competency based and relevant to socio-economic needs of society and the individual rather than a didactic provide of facts.

Children and adolescents who can access high quality learning materials through the internet and other devices are much better able to cope with the challenges of school closures. Poorer children are less likely to access learning opportunities than their peers from wealthier families; boys are also more likely to be able to access digital devices than girls; urban children are more advantaged than their remote rural counterparts, etc. In this regard COVID-19 has reinforced inequalities in education that led the World Bank to talk of a learning crisis even before COVID.

The author notes that the education response to COVID has opened up new ways of looking at teaching and learning; technology has been shown to be a game changer for those who are able to access it. However, many cannot access the internet, or even smart phones; and government and family resources are more stretched than ever. So measures need to be taken to ensure continuity of learning for all children, while at the same time there is now a once in a lifetime opportunity to bridge the digital divide and concomitantly the learning divide that has marked the realities of many children and adults in South Asian society. New actors such as the private sector have an incentive to connect all schools and people. They can therefore bring new resources to education and also an awareness of the skills and competences required in the market place. Governments must however continue to take the lead for the governance of education if it is to be equitable and if children are to be protected from the harm that the internet can bring if not well managed. Governments in South Asia must also invest much more in education. Average investments per capita and much lower than for most other regions.

The author discusses what children will be learning in future, and how they will be learning, who the learning provider may be, how learning will be organized, measured and assessed and linked to societal needs and other challenges such as environmental degradation. It is argued that the SDGs are not achievable without education, and indeed our capacity to respond effectively to ever growing challenges is predicated on education which builds a respect for evidence and science.

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The author concludes that if governments do not invest more now and do not bring other key players on board in support for learning recovery many children will indeed find their learning and earning potential seriously compromised. But if government and their partners respond in urgently and systematically to the crisis much can be saved in the short term and the future will be much brighter for many children and adolescents in the region.



COVID Versus Democracy: India

Rahul Mukherji¹

This presentation will highlight how the absence of democratic institutions and practices lent strength to both competitive authoritarian propensities in India, as well as, engendered avoidable human costs. COVID was not the ideological basis for competitive authoritarian propensities but it did spur them. Moreover, centralized management within the Prime Minister's office – often at a distance from scientific management of a medical crisis, increased the human costs of COVID 19. I will argue that democratic institutions can be eroded by COVID 19. At the same time, competitive authoritarian propensities can increase the toll that COVID 19 can take.

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Strategies for Post Pandemic Economic Recovery in Sri Lanka

H M Gunatilake¹

So far the Covid-19 pandemic has infected more than 395 million people and caused 5.74 million deaths. As the virus evolved with a number of new variants, and many of them are more infectious than previous ones, end of the pandemic remains elusive. Emerging evidence show that it had a devastating impact on the global economy. The global economy contracted by 3.5 percent in 2020, which is about 2.96 trillion U.S. dollars of lost output. Informal sector which employs about 1.6 billion workers experienced the highest job losses. Tourism and travel industries were the most affected sectors. Economic impacts of the pandemic may last long for developing countries and they will bear a higher share of the economic burden.

The five common strategies adapted by majority of the countries for post pandemic recovery are; (i) restoring supply chains; (ii) increasing investments; (iii) reducing cost to business and individuals; (iv) encouraging innovation; and (v) supporting workforce readiness. These common strategies are implemented through a sector focus on tourism, agro-processing, garments, micro, small, medium enterprises (MSME) and digital trade. While these common strategies are applicable to all the developing countries, different regions like Asia and Latin America have refined these strategies to suit their regions' specific needs.

This paper examines the applicability of the above-described common strategies to Sri Lanka given that the country is currently in a deep economic crisis. The pandemic has contributed to the crisis by advancing and exposing the deep-rooted structural issues which were caused by decades of mismanagement of the economy. The country is facing a "liquidity" crisis and "solvency' crisis simultaneously. This is a result of culmination of maintaining a current account and a budget deficit for a long time and financing the gap through external borrowing. At the heart of the crisis is a massive accumulation of external debts. Managing this crises involve not only replenishing foreign exchange reserves to maintain import flows but also the arduous task of debt servicing. Unprofessional and ad hoc crisis management decisions taken by the Central Bank, such as soft peg of the exchange rate, has been aggravating the already unmanageable situation.

Will the post pandemic recovery strategies work when a country is in a "hand to mouth" management regime in terms of allocating highly scarce foreign reserves for essential medicine, fuel, food, agricultural, industrial and service sector (for example tourism) inputs? Lack of essential imported inputs is a major constraint in restoring supply chains. Increasing investments will be an onerous task; government is insolvent and one cannot expect to receive the foreign direct investments which were not coming in significant amount in last 2-3 decades at this time when the economic outlook of the country is highly negative. Governments is unable to reduce taxes and utility costs. Encouraging innovations and supporting workforce readiness is also not practical in the current chaotic situation. Given these reasons the common strategies for post pandemic recovery are, by and large, not practical for Sri Lanka. The country will have to solve its long-term economic problems, rather than focusing in post pandemic recovery. Irony is that Sri Lanka cannot address its deep-rooted economic problem without some relief on balance of payment/foreign exchange and debt crisis. First it should get the help of IMF for restructuring debt, negotiate and agree on a bail-out package, get the help of WB, ADB and other bilateral donors to get long term budgetary support assistance. With

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the help of these agencies Sri Lanka should identify the reform needs and exercise financial discipline under the supervision of IMF and other international agencies.

For the long-term recovery, the author emphasizes the need to declare a clear economic philosophy as the first step of the reforms. While proposing the country should follow free market economic principles, the paper provides a long list of strategic actions to reform the economy and put it back to a sustainable path of inclusive economic growth. The economic principles to address the problems are quite clear and to some extent straightforward. However, the political economy of implementing these reforms is the principal impediment.

Religions and the Covid Pandemic: Exploring the Long Term Impacts

Emma Tomalin¹

Global health policy and humanitarian response have tended to overlook the role that religions play in health and wellbeing for the majority of the poor in the Global South. International organisations such as the World Health Organisation (WHO) base their approach to health upon 'modern', 'scientific' and 'secular' principles. By contrast, religion is seen as the antithesis of these and not something that needs to be considered alongside evidence-based and researchled efforts to address health emergencies caused by pandemics or other humanitarian crises. There is, however, a mismatch between this view of religion at the level of global health and humanitarian systems and how religion operates within the daily lives of those experiencing the highest levels of poverty and inequality and who are most affected by health and humanitarian crises such as the COVID-19 pandemic. Within these communities' people are often highly religious and their religious worldviews play a role in shaping understandings of such crises, including helping to provide a rationale as well as coping strategies. Over the past couple of decades, global health and humanitarian actors have begun to take religion more seriously and are more likely to seek to form partnerships with faith actors. However, such engagement is very much on the terms of the global actors, it is not a consistent feature across all activities and many still see a bias that views religion as an outdated inconvenience rather than a vital, enduring and meaningful aspect of social, economic, cultural and political life.

Nonetheless, during the COVID-19 pandemic, religion has been seen to contribute towards attitudes that lead to poor vaccine uptake as well as to situations where religious minorities have been attributed with spreading the virus. Here the intersection between existing religious tensions and a global pandemic further entrenches religious inequality and marginalisation. This underscores the apparently negative ways that religion can influence health and wellbeing, but suggests that instead of ignoring or rejecting religion because of this it needs to be front and centre in global efforts to secure better health. This includes facilitating research to better understand these dynamics as well as seeking to form partnerships with faith actors who know their communities best, many of whom are keen to engage with global health and humanitarian actors to promote better health practices, including vaccine uptake. Moreover, many faith actors, including places of worship and faith based NGOs, play a key role in providing practical, psychological and spiritual support to those experiencing health crises.

In this presentation my aim is to focus on the long term impact of the religion/COVID-19 intersection from three different perspectives: global institutions such as the World Health Organisation; local faith actors such as places or worship and faith based NGOs; and the local communities themselves. In what ways has COVID-19 impacted on how Global institutions engage with religion and faith actors? What is likely to be the lasting impact of COVID-19 on the activities of places of worship and faith based NGOs? And finally, what are the long term implications of the religion/COVID-19 intersection for how people view their health and the decisions they make about it, as well as for social and economic inequalities?

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"Silya at Ayuda": The Chair as a Symbolic Object in the Time of COVID-19 in the Philippines¹

Melvin A Jabar²

The central theme of this paper involves an example of how a physical object (in this case, a chair—*silya o upuan*) can have different functions and meanings as a result of changing social and environmental conditions, not only as an adaptive response but as reification of prevailing social realities. Such realities can either be reinforced or suppressed by these very specific social and environmental conditions.

This paper is inspired by my personal and hopefully astute observation of how the chair as a physical object has transformed in the time of COVID-19 relief operations. During the distribution of relief goods (or *ayuda* in the local language) in many provinces of the Philippines, families were asked to place a chair outside their home to avoid human contact during delivery and hence lessen the transmission of the virus. An ABS-CBN news report in May 2020 described relief goods that were placed on chairs lined up outside the houses of a village in Cavite, in order to rigorously implement physical distancing (ABS-CBN News, 2020). The same practices were noted in other areas of the country, including Nueva Ecija, the National Capital Region, Bulacan, and Pampanga.

My paper is based on how I and how other people see the chair as an object in relation to relief operations in the Philippines during the COVID-19 pandemic. Data for this article has been culled from netizens' Facebook (FB) posts relating to the chair (*silya*) and to its role in relief goods distribution (*ayuda*). I also searched for news articles regarding the use of the chair in relief operations and engaged in some FB chats with people who posted related online materials, for clarification and probing. Although quite minimal, I also made reference to my personal experience in receiving relief assistance during the pandemic.

In this paper, I discuss how the chair as a physical object represents social realities in the Philippines, even in a situation like a viral pandemic. A chair in this regard is taken as cultural material and its function develops through time. This paper is anchored on symbolic interactionism and uses it as a lens in making sense of how objects are given life by humans. As we are probably all familiar with such situations, symbolic interactionism alludes to the idea that people make meanings or attach meaning to objects, depending on how such objects are given a meaning at a specific point in time or in a particular social and spatial context. The chair has been seen as a symbolic object, a symbol of anticipation, a symbol of social solidarity, a symbol of class divide, and a symbol of social trust.

Unlike these countries, distribution of relief assistance in the Philippines in the form of both cash and goods was done manually, through house-to-house visits and face-to-face cash distribution. What is unique in the Philippine case, however, is the provision of re-packed relief goods, which were distributed in local communities. During the said distribution, the chair was used as a conduit object. Given this scenario, I began to realize that in the COVID-19 experience, the chair as an object has been assigned another physical function and has been given another life.

¹ This work is based on a book chapter written by the author which will be published by DLSU Publishing House.

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Kroes (2003), based on the work of Searle on Screwdriver Philosophy, argues that it is humans that assign functions to objects. In other words, the function or utility of an object depends on what Searle calls the "assignment of function" (Kroes, 2003). However, aside from its changing physical function, the social meaning of objects also varies through time. This observation was quite evident in how the physical chair found itself having a different utility and social meaning during a pandemic.

In this regard, the chair as a material object somehow developed its "being" or "spirit," as if it is the very entity that is actively receiving the relief goods. I see this "being" or "spirit" as an extension of the possessor's self. For instance, one netizen referred to the chair as the one who would receive the relief goods, and not the possessor. The post read, "There you go, my seat got a blessing." In another FB post, a netizen described that "the chair is already exhausted. There are no relief goods placed in it. A little while longer, you will have them." One netizen also referred to the chair as "someone" who is queuing for the relief. Similarly, another post conveyed that the chair was now ready to receive the relief goods. In a poetic post, one netizen wrote, "the chair near the gate, has its own eyes, anticipating the promise that small blessings will come forth."

In relation to the theme of the conference, this paper will reflect on the long-term impacts of COVID-19 on cultural norms and changes in meaning making not only on social relationships but also between human and the physical object, in this case the chair. This changing view of the chair represents a kind of post-pandemic COVID where social interactions will be limited and that a new normal is forged. For instance, in the Philippines, there are plans not only of my university but by the government to make education hybrid instead of holding face-to-face classes as many students have purportedly adapted to the modular or online learning.

Science, Health and Foresight Analysis: Foresight in the time of COVID-19

Vivian Kwang-wen Lin¹

The COVID-19 pandemic has tested the response capacity of governments and scientists, as well as the relationship between them. While the world has focused on the immediate management of the public health crisis, there have also been conversations about how to 'build back better', attempting to bring in lessons learned amidst the various waves that have traversed countries. In 2020, still in the first global wave, the Western Pacific Regional Office of the World Health Organization implemented a futures think tank process in order to consider possible pathways forward through re-imagining the multiple possible futures that could arise from the pandemic. Foresight methodologies was used to enable individuals and organizations to envision future scenarios as support for planning for greater resilience.

Four think tanks were held on different themes: equity, non-pharmaceutical interventions, non-COVID mortality, and ethics. Using a six-step methodology, scenarios were developed for an 18-month horizon (ie to late 2021). Backcasting was used to generate recommendations for WHO response and support for countries. The process required multidisciplinary input, scanning of emerging literature and agile working, all done remotely. Key dimensions considered included technology, people and society, politics and governments, and the health sector. The think tanks allowed for a more holistic pandemic response, highlight emerging issues, and helped identify strategic opportunities for WHO support to member states.

In 2022, some months following the initial planning horizon, it is interesting to revisit the scenarios envisioned. It is also useful to reflect on the contribution of foresight as well as the limitations of foresight in pandemic management. There remain longer-term impacts and issues that require consideration, as the science continues to unfold. While laboratory and medical scientists have formed rapid collaboration since the beginning of the pandemic, how social science and basic sciences can jointly support policy decision-making remains a challenge. The stronger integration of foresight in the WHO may be an important step forward to supporting countries to develop public health policies that integrate more closely with other policy spheres.

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Long Term Social Impacts of Covid-19 on Education

Upali Sedere¹

Sri Lanka had to close down formal schooling in March 2020 when the first Sri Lankan national tested positive for COVID-19 on 10 March 2020. The Government of Sri Lanka rapidly introduced measures to curb the spread of the disease and imposed a strict island-wide lockdown on 16 March 2020. Infected patients were treated in secure environments, testing and contact-tracing efforts were quickly escalated, and awareness raising campaigns on risk and prevention measures were implemented. During this first wave, schools remained fully closed and reopened in August 2020. With the second wave the schools were again closed in October. Schools reopened for Grade 6 and above on 23rd November other than in the Western Province. Grade 2 to Grade 5 classes opened in January 2021 and Grade 1 reopened in February 2021. In the year 2020, schools were fully-closed for 141 days and partially closed for 37 days. The worst case was Bangladesh where schools were fully closed for 198 days. India's schools too remained 148 days fully-closed and 89 days partially-closed (UNICEF, UNESCO Feb 2021; UNICEF UNESCO August 2021). In general, 1.6 billion students or 91.3% of the total student population in 188 countries were out of school. The only consolation was that most COVID-19 infections in children and adolescents were mild or asymptomatic. Children and adolescents are at low risk of severe disease and death from COVID-19 and children are not among the main drivers of the pandemic. Yet, when the infected were shifted to quarantine centers families were in disarray. The health curfew and the lockdowns were all unexpected incidents and caused fear and trauma in children. Daily wage earner lost income and their homes were in stress with no source of income and lack of food security. Although the Government of Sri Lanka offered many free services, the social-stress was very high. This definitely had a direct impact on children. The feeling of vulnerability, insecurity, the fear of losing parents, lack of opportunity to socialize, were not conducive for learning for any child in poverty-stricken homes and families; and even for children in affluent homes. Now the third wave of COVID-19 is once again increasing the number of infections and parents are reluctant to send their children to school. The real impact of all these situations is difficult to assess. It is too early for the society to witness the actual long-term impact of COVID-19 on education. Beside all these social implications there downturn in the economy of Sri Lanka. Over 60% of the Sri Lankan economy is in the service sector. Service sector gets disturbed even with small incidents and Covid 19 was a major blow, seriously affecting the economy. Daily wage earners had no income as there were no jobs. Those who depended on tourism lost all incomes. Banks and other businesses had to find new mechanism to operate. All these have an impact on education. All in all, education was one of the worst affected social sectors during the pandemic. In many cases physical delivery was replaced by online modes, but generated debate about the very nature of education. Socio-economic inequalities were exacerbated by online modes. Although the longterm impact is yet to be seen, in the short term the lost schooling for months definitely has negative impact on the children of the lower socio-economic class as they were also the victims of the digital divide and worst affected homes due to COVID-19.

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Household Response to COVID-19 in Fragile Regions: Evidence from Kashmir

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Abstract

COVID-19 shock has immensely affected communities, societies and economies. Lockdowns occasioned, among other things, disruption in production activities and supply chains. Households reported interruption in earning and decline in consumption and/or altercation in consumption baskets. These changes were more severe for economies that had no prior experience of shocks. The claim, however, needs to be validated. The Kashmir region provides such a case for investigation. The region has been affected by low-intensity violent conflict for decades with recurring extreme shocks. The latest shock of August 2019 with a complete breakdown of essential services was believed to be more severe than COVID-19 Shock. The conflict shocks although negative in nature have prepared the households to "cope up" and devise strategies for unforeseen external shocks. In the light of such historicity, the current paper investigates whether COVID-19 shock has been any (in) different from conflict shocks. Based on a primary study the paper analyzes the consumption habits and patterns of the local people. The study finds that with prior experience of conflict shocks in the region, people have learned and developed coping strategies, keeping their consumption stable during COVID-19 outbreak. Accumulation of assets and food grains, absence of homelessness and landlessness, the prevalence of kitchen gardens, switching jobs and strong social cohesion have helped people to shield from any substantial reduction in economic welfare during the pandemic. The paper confirms that persistent low-intensity conflicts make people more resilient and strengthen their will to survive and emerge relatively better off after an uncertain external shock.

Keywords: Consumption, Fragility, Kashmir, Shocks

Introduction

The trajectory of economic growth is non-linear due to asymmetric response to shocks by economic agents and units. The transmissions and pathways to development and prosperity are not uniform. Exogenous and endogenous shocks define the economic activity and macroeconomic growth. Each economic unit, be it the individual, the household, the national or the global economy exposure to uncertain and (un)expected shocks defines and shapes the pathways towards prosperity and welfare. Every economic unit and/or agent experiences disturbances in the "normal" path and functioning. Droughts, rainfall shocks, famines, oil shocks, general recession, financial meltdown, political uncertainty, widespread health hazards, violence and appropriation are a case in point (Frankenberg et al., 2003). Effects of these shocks on economies and economic agents vary in time-space context. Different shocks can generate similar consequences but trigger different responses. Similar shocks might cause divergent outcomes but similar responses across people and places. Temporary external

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shocks, like a market shut down or a credit crunch for instance, can result in an insubstantial decline in consumption but a substantial deterioration in investment (Cochrane, 1994). A permanent shock, on the other hand like the installation of a dictatorship or an imposition of consumption tax, can cause a negative shift in consumption investment and expectations (Zhou, 2021). Based on rational expectations under an uncertain environment threatening disposable income over some time horizon, consumers may cut a part of consumption in the short run and smoothen it over the longer term. Further, with resources at disposal, economic agents in developed countries may be more resilient to shocks; unlike their counterparts in the "developing" world.

The empirical literature is suggestive as well as indicative of the general tendency of households reducing investment and consumption, particularly of durable goods during and immediately after experiencing an economic shock. (Di Maggio et al., 2020). Households increase the demand for precautionary savings and liquidity. This affects economic activity and utilization of credit and also impacts consumption levels (Bertola et al., 2005; Gourinchas & Parker, 2002). If the shock event is massive, the uncertainty attached can cause drastic and extensive damage; lower consumption became endemic after the 2008 recession (Pistaferri, 2016). Similarly, other shocks like drought, supply and/ price shocks also generate welfare reducing effects on households and communities. Further, external shocks to the economy and economic activity are non-trivial and cause substantial variation in poverty levels (Dercon & Krishnan, 2000).

Against this backdrop, the effects of the pandemic are relatable to the general "family" of welfare reducing expansive externalities. COVID19 has been an "economic monster" a "rare disaster". Its cumulative impact has been the worst since the Great Depression and far worse than the global meltdown of 2008 (IMF, 2021). Market closures, halted production processes, blocked supply chains, and cessation of transnational and international travel and trade yielded unprecedented unemployment rates, GDP declines alongside a collapse of the "best in class" health sectors. Global institutions like World Bank, IMF, and credit rating agencies repeatedly and religiously downgraded GDP forecasts for all countries every quarter since January 2019. Job and income losses occasioned individual and household vulnerability. Transmission of pandemic related vulnerability to households found pathways via declines in labour income, breaks and eventual halt on non-labour income, decreased consumption (direct effects), and disruption of services (World Bank, 2020). The pandemic has intensified hitherto developmental challenges, either by reversing the existing progress of poverty alleviation and/ or by increasing the severity of the previously poor (Kokas *et al.*, 2020).

While the pandemic got a "grip" on the global economy, we already had an extremely asymmetrical global order in place. With violence and civil strife affecting every 3rd global citizen in 2019, the pandemic multiplied the vulnerability of those already navigating fragile socio-cultural and political spaces. As the Heidelberg Institute for International Conflict Research (HIIK) reports, "In Europe, in the year 2020, two conflicts escalated into wars, in Sub-Saharan Africa six wars continued, and another five violent crises escalated into conflicts, making Sub-Saharan Africa the region with the highest number of conflicts in 2020. There were five wars in the Democratic Republic of the Congo and Ethiopia. In Asia and Oceania, America as well as West Asia, North Africa and Afghanistan (WANA), on the other hand, the number of wars remained constant or decreased slightly. The wars in Brazil, Libya, Syria and Yemen continued. As in previous years, violent domestic crises such as the opposition conflicts in Venezuela or Nicaragua continued to be the most common type of conflict and shaped the global conflict landscape (HIIK, 2021)". Thus while pandemic was/is a global phenomenon

so is the prevalence of violence, civil strife and conflict. However, as argued above, external shocks are neither "twin brothers" nor are they far- off cousins. They can generate different consequences and can be traced back to different causative factors. Accordingly, economic agents from least developed, fragile and conflict-affected regions (LGFCAR henceforth) are expected to have responded to economic uncertainty emanating from the health crisis in a different manner. With prior exposure to uncertainty on account of socio-cultural, political and consequent economic uncertainty the LGFCAR are expected to have developed an "accommodation" to uncertainty particularly at the household level. For example, vast literature suggests that households (particularly in developing countries) employ novel strategies to smooth consumption or to cope with risk (Deaton, 1992). These include savings, informal mechanisms or income diversifying options. Such consumption smoothing runs as a counterpart to the idea of permanent income⁴ and life cycle hypothesis. When households anticipate economic shocks, they adopt low-risk low return activities that allow for smooth consumption (Morduch, 1995; Dercon, 1998; Dercon et al., 2005b; Dercon & Krishnan, 1996). In the absence of credit markets, and constrained access to markets, households seek to accumulate assets – land, livestock – so that during and after exposure to a(a) (economic) shock these assets can be liquidated to smooth consumption (Dercon & Krishnan, 1996; Fafchamps et al., 1998; Rosenzweig & Wolpin, 1993). In order to reduce risk, households tend to diversify activities and opt for these activities in which there are lower levels of contingent risks (Block et al., 2001; Deininger & Okidi, 2003). Following this strand of literature, it is expected that "regions/places and people with prior exposure to uncertain and external shock might have been less affected by COVID-19 on the economic welfare parameters than those, who hitherto had no exposure to such large scale external shock".

Some recent empirical research has been directed towards quantifying and measuring the resilience of people while facing the novel global pandemic. Studies like Bryce et al. (2020), Fernández-Prados et al. (2021), Ferreira et al. (2020) among others have shown evidence of maturing and growing resilience among the people across communities and regions. However, no evidence is "out there" to underline the dynamics of persistent resilience, group behaviour and self-help demonstrated by people living in the LDFCAR. It is in this context that this chapter contributes by studying the risk indifference behaviour of conflict-affected people amid the expansive pandemic in Jammu and Kashmir.

Jammu and Kashmir (J&K) in general and Kashmir region particularly, has been exposed to recurrent conflict shocks. Recently, (prior to the COVID-19 necessitated lockdown), for instance in August 2019, 'special status' or the autonomy 'within the Indian constitution that was enjoyed by the erstwhile state of J&K was repealed by the central government resulting in a complete lockdown for months - curfews (days and nights), complete communication blackout (landlines, mobile networks and internet), immobility, zero transportation and market closure were witnessed. Kashmir has witnessed similar harsh lockdowns since 1990s. Such lockdowns and/or 'crackdowns' have been more severe than COVID-19 restrictions. These recurrent shutdowns, hartals and disturbances have forced but accustomed households towards developing various coping strategies. This has enabled Kashmir households to develop novel coping strategies over a period of time. Accordingly, the present chapter attempts to understand this behaviour at the household level and draw lessons for developing "exit" strategies from external shocks.

⁴ These theories hypothesize differently about the way people's consumption is altered based on their income. These theories have been tested and empirically validated. These theories associate the consumption of individuals in light of their average life-time income than with the immediate income.

Conflict as a Shock and the case of Kashmir

Armed conflict is a serious negative external shock (Parlow, 2012). It is 'development in reverse' (Collier, 1999). Violent conflict does not only kill and injure people but also causes extensive damage and destruction to economic activity. Paul Collier (1999) contends that violent conflict disturbs the normal economic activity by way of the destruction of physical and human capital, disruption in market functioning, diversion of resources from peaceful to violent inducing activities, dissaving or lack of investment, and capital fight. This limits the potential economic growth of affected economies as argued by Gonzalez (2007) and Grossman & Kim (1996). It is "as if one part of the economy is producing and another part is destroying" (Hoeffler and Querol 2003).

From the perspective of household welfare, conflict inflicts loss of earnings and livelihoods, increases poverty and occasions a decline in consumer spending. If a working member is killed in the violence, it directly results in a loss of earnings for the household. Most are injured in violence; therefore, the households have to draw upon crucial small savings to pay for medical bills. If the household is unable to substitute the working men, it may drift into poverty. As a coping strategy, households are forced to employ children in place of lost labour, therefore, entailing future losses in human capital (Justino, 2011). An inhibiting atmosphere is created by this uncertainty in which people miss "profitable investment", perpetuating poverty (Günther & Harttgen, 2009). There is an insecurity with respect to both human and physical capital returns (Lloyd-Ellis & Marceau, 2003).

Conflict in Kashmir is a "disputed legacy" of the partition of the sub-continent in 1947. After India and Pakistan got independence from the British, Kashmir was one of the 576 princely states that had to merge with either India or Pakistan. Both countries began to fight for it till the Hindu Maharaja of Muslim dominated region of Kashmir signed for "conditional" accession to the Union of India. Pakistan opposed the move and termed it as a "decision in duress". Fighting ensued and United Nations in an attempt to negotiate "peace" passed multiple resolutions at the Security Council in 1948 calling for Plebiscite (conditional upon meeting certain criteria⁵) to be held at an "appropriate" time in the near future. The plebiscite could never be held and still remains elusive. In 1990s an armed rebellion against India broke out in J&K. It still continues and has had cyclical phases between high intensity (early 1990s till 1995), low intensity (1996 to 2004) and a renewed new phase of militancy since 2004. Conservative estimates put the death toll of the Kashmir conflict at 47,000 (MHA 2018) while as independent sources put it higher - more than 70,000 (Imroz et al., 2012). Given its geostrategic positioning and multitudinous claims of "sovereignty" upon its territory by three nuclear powers and influential global players – India, Pakistan and China⁶ the Kashmir region is the "most dangerous place" (Marcus, 2000) and "most militarized zone" (Mukherjee, 2014) in the world. Recurrent upheavals and outbursts of militancy have been experienced in the last decade that has seen widespread engagement of local youth to militant ranks.

Recurring violence triggered by "politics in historicity" has negatively affected the landlocked local economy. Private as well as public assets worth billions have got destroyed. Perpetual cycles of violence have occasioned a "missing and/or inefficient" market system. Excessive shutdowns and violent demonstrations have dried up investments and the propensity to invest. From 1991 till 2016, Kashmir, on an average per year basis, experienced 74 days of

⁵ Like peaceful agreement on the points highlighted by the UN Resolution 47 (1948) between India, Pakistan and the residents of Jammu and Kashmir

⁶ The Aksai Chin, which is the eastern portion of larger Kashmir under Chinese administration.

conflict-related/induced shutdowns, a total of about 2000 (Parvaiz, 2017). Given that the region is neither suited nor appropriate for (heavy) industrialization, the livelihood depends upon self-employment and casual labour whose earnings in turn rely on daily market functioning (as and when it functions on a sustainable basis). The recurrent conflict shocks have thus disrupted economic activity and entailed an inestimable loss at the micro as well as macro levels. Although the household level welfare losses due to conflict are hard to estimate, recent rough estimates at the macro level put the loss (of six months of shutdown) in 2016 at 16,000 crores (JK Economic Survey 2016). The August 2019 pre COVID-19 crackdown (of five months) is estimated to have resulted in losses amounting to more than 17,000 crores (Reuters, 2019).

Mainland India was shocked to be put into an abrupt lockdown starting midnight, 15th of March 2020. To the people in Kashmir, this "midnight" lockdown made no difference, except that the already in-place restriction got renamed. Markets would continue to shut down. They remained shut. They continued to be locked down elsewhere also and people in Kashmir were locked up. The expanse, intensity and scale of conflict in India was/is bound to increase as well as "deepen" poverty ratios and dampen the consumption for a long period of time. With such an extensive lockdown either occasioned by conflict (in Kashmir and other fragile spaces) or by COVID19 (most parts of India) or by way of an extension of the former into the latter (as is the case with Kashmir) no economy can expect to be as resilient as not to fall into a "low level equilibrium trap".

Data and Methodology

Primary Surveys over the recent past have evolved in scope and space. The Information and Communication Technology (ICT) revolution entails and also paves way for novel ways of conducting reliable, up to date and easy to process/use data attracting minimal costs. A self-administered questionnaire distributed online by the researcher(s) is one such instrument. This mode of the survey has been pitched against the traditional "Pen – Paper/interview" frameworks. However, results of a questionnaire that was disseminated among the respondents through three modes, (a) in-person survey using pencil and paper, (b) telephonic interview and (c) online survey method confirm(ed) that all three ways are equally robust and the answers do not vary much (Knapp & Kirk, 2003). In the sphere of "honest responses" and respondent sensitivity, online surveys are a better way of conducting research (Evan & Miller, 1969).

Basic data for the current study is generated from a self-administered electronically mailed questionnaire forwarded by the researchers to one hundred and thirty (130) randomly chosen respondents. However, one hundred and twelve (112) filled in responses were received. Out of which one hundred (100) responses were processed for analysis. Each respondent represented a given household drawn from the various social and educational background(s). The rural-urban distribution of the households in the sample is 7:3 which roughly corresponds to the rural-urban population distributions (73% rural and 27% urban). The questionnaire has ninety-five questions randomly distributed with a focus on "Household (Economic) behaviour" encompassing three recent and recurrent shocks faced by the Kashmir Economy distributed across three years viz, 2019, 2020 and 2021 (up to August). Responses to each question and each set of questions have been recorded, analyzed, cross-tabulated. Inferences are drawn from the tabulation. Responses from the survey are evaluated and examined in light of the existing empirical evidence from the global conflict literature.

For the purpose of the current study, conflict is broadly defined as a systematic breakdown of the social contract (Justino & Verwimp, 2013)⁷. A conflict involves more than one party, amongst which one is the existing state and there is the use of violence by one or all parties leading to persistent chaos (UCDP 2021).

Results & Discussion

65% of the respondents reported income losses to households from 2019 through 2021. 29% of the households faced difficulty in paying utility bills, especially electricity and water bills. Interestingly, during telephonic conversations with some of the respondents (n = 17) almost all household elders to which one of the authors (Mehak Majeed) spoke, recalled their experience of hardships and major consumption declines (read shocks) in the latter part of the 1980s through early 1990s. The household elders would argue that "Since there has been a steady adjustment in the consumption pattern and consumption smoothening household preparedness for the "next" anticipated conflict shock is always up to the mark"8. More than half of the households (53%) confirm "learning" and "developing" coping strategies. Households store, preserve and safeguard assets like (staple) food, shelter and other basic necessities both as a matter of habit and exigency. Given the harsh climate, difficult topography, land-lockedness and hostile political environment, each local household as a matter of habit, practice and "ritual" stores rice (the main staple) sufficient to meet the household requirement for about six months in peacetime. Pulses, lentils, dry vegetables and other basic food items are also stored. For example, at the time of survey (July 2021) 82% of respondents declared that there are enough grains in their household to last for about a year. There is a widespread prevalence of kitchen gardens across Kashmir. This helps with the availability of green vegetables as does the availability of livestock with protein needs of the population. House ownership and the complete absence of land and/or home destitution is an extreme buffer against shocks of all types and provide a cushion for the households to meet more urgent consumption expenditures. 98% of the population owns shelter. Lockdowns elsewhere necessitated switching jobs and about 45% of the respondent households reported that "at least one of the household members have switched jobs, either in the August 2019 lockdown or the COVID-19 related lockdown of 2020, reiterating that the cause of the "switch over" made no difference to the decision making process". People reported to have got engaged in activities that are relatively "shock absorbing" and stable enough to face cycles of recurrent fragility and endemic violence. Rural Kashmir has consciously witnessed a shift away from traditional agriculture towards horticulture. This is mostly guided by expectations of better and stable returns that would feed into much needed savings to be liquidated when violence erupts are lockdowns ensue.

91% of the responding reported confidence in facing recurring economic shocks fostered by natural, man-made or conflict specific adversities. Households exhibit a self-belief of "learning by experience" about how to survive in the harshest conditions and unexpected external shocks. Strong social networks have developed in Kashmir in wake of "sharing the grief". 97% of respondents report "belongingness" to a group that always comes together to help each other in times of crisis. Self-help, particularly in the wake of 2014 floods and the rescue operations at that time were primarily community driven and point towards strong social networks functioning efficiently in Kashmir as highlighted by reports like Bukhari (2014), (Fai,

Social contract is an "institutional mechanism" that provides for conflict mitigation and resolution. Break down of social contract occurs when there are differences in governed (or certain groups among them) and governing on issues like state's monopoly over violence, rule of law or the contestation over legitimacy concerning the right to define and enforce property (see (Justino & Verwimp, 2013 for details)

⁸ Provide name of someone you have spoken to on phone along with details

2015) and Mehak (2015) among many others. 72% households reported to have got assistance (economic, social and psychological) from relatives, friends and neighbors across time. 74% respondents confirm that their basic consumption hasn't changed from 2019 through 2021. The basic reason for the same being the preparedness to face a(ny) new economic shock. People have developed coping mechanisms and are continuously improvising upon them to keep on sustaining. 82% of respondents reported indifference towards the vagaries of the COVID-19. To them it was just a "lockdown", something they have been used to every now and then. One of the respondents, Mohammad Amin Allaie (59), over the telephonic conversation joked about the perks of the COVID-19 lockdown as compared to the recent August-19 lockdown. Responding to the question whether COVID-19 lockdown has been harsh to handle he said, "It is in fact a treat! My best friend lives 3 kilometers from my home and I could barely visit him for the first time in 40 years during August-19 crisis and now all I need to do is to put on a mask, sanitize my hands properly and we are back to enjoying our afternoon supper together. Of course there are some alterations like sitting considerably apart and carrying my own mug but we Kashmiris are used to adjustment better than anyone else in the world.

Interestingly, 68% respondents reported "feeling" safe on the streets during the COVID-19 curfew in contrast with 21% reporting a "feeling" of security during the 2019 lockdown. In the latter case there was no communication, no access to healthcare and other basic requirements. 61% respondents believe that it is the conflict shock which has been harshest upon the local population. At the same time there is a determined resilience among the people to face any new/next shock with same old resolve till durable peace is established in the region with the mutual consent of every party involved.

Kashmir conflict is classified as low in intensity but protracted. It is one of the oldest *ongoing* conflicts in the world. Accordingly, its impact on local population has been endemic, long term and deep-rooted (Tandon, 1995). Ordinary Kashmiri has "lived" the conflict and has accommodated to it. Recurrence of violence has created an accommodation to "fragility" and has given rise to novel sustainable life-course perspective(s) at the individual and community level.

Conclusion

The current study using the online mode of surveying the households has attempted to validate certain unique characteristics of fragile region with regards to the shock absorption emanating from latest COVID-19 outbreak. The study takes a case of Kashmir. Given the existence of the low intensity but perpetual conflict in the region people have witnessed a vast number of conflict shocks especially after 1990 outbreak of violence, more severe than COVID-19 shock. As such people are familiarized to shocks through time and space and are in a way better equipped/resilient to absorb them. The study points out to the coping strategies people have developed over their life course that have cushioned them in crisis. For instance, more than half of the household's samples surveyed (53%) confirm to "learning" and "developing" coping strategies. Households have reported accumulation of assets, food grains and other necessities due to climatic and conflict nature of the region. Coping strategies such as absence of homelessness and landlessness, prevalence of kitchen gardens and switching of jobs during shocks have mitigated crisis. The violence in the region has also strengthened social cohesion among people. 97 percent of people have reported to come forward to help each other during crisis. People rely more on agency function than to wait for government intervention.

Keeping such historicity of violent shocks and coping strategies in mind, households in Kashmir has not reported such substantial negative impact of COVID-19 as compared to more severe conflict shocks. As reported in the survey, 82 percent were indifferent to COVID-19 shock, 68 percent felt more insecure during conflict shock and 61 percent believed conflict shock (August 2019 here) as harsher than COVID-19 on account of complete breakdown of communication, health and other vital services. Therefore, the paper presents "preliminary" evidence that households in Kashmir have become resilient over time and exhibit better capacity to have absorb pandemic shock than those counterparts elsewhere that had no prior experience of shocks.

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Examination of the Impact of COVID-19 on All Share Price Index: Evidence from Sri Lanka

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Abstract

Financial market forecasting has attracted high interest amongst researchers with structured models and theories. After the COVID-19 outbreak, the accurate long term prediction of financial market variables would become problematic due to the complex pattern and unpredictable financial and non-financial factors volatility. Therefore, this study focuses on long term forecasting the All Share Price Index (ASPI) in Sri Lanka after the COVID-19 outbreak. Hence factors such as the age of COVID-19, number of COVID cases, fully vaccinated population are selected as independent variables to find out the long-term pattern of ASPI. Furthermore, fixed deposit interest rate, exchange rate, gross domestic products are controlling variables to forecast ASPI. From January 2020 to December 2021, monthly data were collected to test the hypotheses through the forward regression method. The study's finding indicates the age of COVID-19; the number of COVID-19 cases are only positively significant with ASPI. The R² value of the final model is 89%, and both independent variables are significant at less than 5% level. However, the P-value of fully vaccinated population, Fixed deposit interest rate, exchange rate, GDP are greater than 10%. Therefore, after the COVID-19 outbreak, the age of the COVID19 and COVID-19 cases will define Sri Lankan ASPI for the foreseeable future. These findings guide investors to make decisions regarding the capital market. This study was subject to data collection limitations that restricted two years' sample duration.

Keywords: ASPI, COVID-19, GDP, Exchange rate, Fixed Deposit Interest rate

Introduction

The share market of Sri Lanka has become one of the most uplifting aspect of the SriLanakn economy after civil war. Sustainability of the economy is largely depending on wider investment opperunities in share market. A share market is a place where combination of both buyers and sellers in a single platform for offering shares to the general public to raise their capital needs, an expansion for new operations. Shares are the ultimate financial assets in financial market and its prices depend on many factors (Esmaeil, Hassan, & Arash, 2010). According to The Efficient Market Theory "an efficient market is a market where the stock prices at every point in time give a correct estimate of the intrinsic value" (Chernyakov, Akberov, & Shuraev, 2021). The out break of the COVID 19 has enormous implications in the share market. This pandemic forced the market to face liquidity crisis and increases the volatility. Share markets all over the world were very resilient during the pandemic period. The world's financial markets, especially the stock exchanges, have also been infected by COVID-19, since the announcement of positive cases in early 2020 caused securities prices to fall and volatility to become high. Especially for the stock market, there was a drastic decline, where the market value lost about 30% in a few weeks. COVID-19 has caused severe shocks in most stock markets, including Sri Lanka. For Sri Lanka, COVID-19 has caused negative economic growth (Pathirana, 2020).

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Investment in shares is one of the major paths of investment that yields significant returns to investors. It is also a source of finance for the capital requirements of firms. Returns from such equity investments are subject to vary owing to the movement of share prices, which depend on various factors which could be internal or firm specific such as earnings per share, dividends and book value or external factors such as interest rate, GDP, inflation, government regulations and Foreign Exchange Rate (Endri , Widya , Razak, Laynita , & Renil , 2021). Share price is used as a benchmark to gauge performance of a firm and its variations as an indicator of the economic health or otherwise of a firm hence the need to be conversant with the factors that could adversely affect share prices.

Problem Statement

Sri Lankan financial economists, policy makers and investors have unclear idea about long term exact patterns of the share prices after COVID19 pandemic. There are few researchs analysis the short them changes in share price immediately after COVID19 pandemic, however limited number of studies forcus on long term changes in share prices. high interest and need to be evaluated empirically. Therefore, the researcher examines the impact of COVID 19 on stock prices in long term order to identify the COVID relavent factors that going to changes on stock prices with special reference to Colombo Stock Exchange. This study focused on the Colombo stock exchange (CSE) as one of the electronic markets for trading in South Asia. Specially how COVID19 going to impact on share price in long term period.

Objectives of the Study

The main objective of the study is to examine the impact of COVID 19 on stock prices in long term. Specifically this study attempts to find COVID relevant variables such as age of COVID19, number of cases, and number of vaccinated population in addition to the book variables such as interest rate, exchange rate and GDP.

Significance of the Study

Share market investors have a great interest in finding the COVID19 factors which forecast share prices in long term. They can correctly manage their risk and returns, if they can predict the share price in long term. Meanwhile, finding the study will support to policymakers, investment analysts, fund managers regarding future share market activity. It provides academic scholars with extra information on the application of methodology in order to researcher examines the impact of COVID 19 on stock prices in long term.

Literature Review

Share price can be divided into three, namely first, the nominal price, is the price stated in the stock certificate set by the issuer to assess each share issued. Second, the initial price is the price recognized when the share price is listed on the stock exchange. Third, market prices are selling prices from one investor to another. This price occurs after the shares are listed in the stock and every day announced in the newspaper or other media is the market price The factors affecting stock price of companies listed in stock exchange market have been studied by many researches. Some of the research has identified the factors such as fundamental factors, external factors, and recently the bank's health factors (S., A., & Abdul, 2020).

Rajamohan, Sathish and Abdul, (2020) analyses the impact of COVID19 on Stock Market especially in automobile sector of National Stock Exchange, India. Result from the GARCH (1,1) and RSI help to determine the impact of COVID – 19 and higher amount of equities been sold at undervalued exhibits significant impact in the selected sectoral index in India. Comparing the return of the automobile sector index has been recorded low return. Hence with the results of all the analysis it can be understood that the COVID-19 in India made an adverse impact in the automobile sector during the study period.

Another study examined the response of stock prices on the Indonesia Stock Exchange (IDX) to COVID-19 using an event study approach and the GARCH model. The results of the event study test found that negative abnormal returns did not appear on the event date. This means the capital market does not react directly to government announcements about positive COVID-19 patients. (Endri , Widya , Razak, Laynita , & Renil , 2021). Another study focuses on the relation between stock price returns and oil price returns covering the COVID-19 period. This relation is examined for major net oil-importing Asian countries. Utilizing daily data, we fit a DCC-GARCH model. We find evidence of a positive co-movement between oil price returns and stock price returns during the COVID-19 period. This indicates that falling oil prices act as a negative signal for the stock market (. Prabheesh, Rakesh , & Bhavesh, 2020)

Regression model- forward selection criteria

This method is often used to provide an initial screening of the candidate variables when a large group of variables exists. For example, suppose you have fifty to one hundred variables to choose from, way outside the realm of the all possible regressions procedure. A reasonable approach would be to use this forward selection procedure to obtain the best ten to fifteen variables and then apply the all-possible algorithm to the variables in this subset. This procedure is also a good choice when multicollinearity is a problem. The forward selection method is simple to define. You begin with no candidate variables in the model. Select the variable that has the highest R-Squared. At each step, select the candidate variable that increases R-Squared the most. Stop adding variables when none of the remaining variables are significant. Note that once a variable enters the model, it cannot be deleted (Esmaeil, Hassan, & Arash, 2010).

Methodology

The Colombo Stock Exchange (CSE), has 285 companies representing 20 sectors in the GICS industry by 30th September 2020. Those industry grouped as Energy, Materials, Capital gods, Commercial and professional services, Transportation, Automobiles and components, Consumer durables and apparels, Consumer services, Retailing, Food & staples Retailing, Food & Beverage & Tobacco, Household and Personal products, Healthcare Equipment & Services, Pharmaceuticals & Biotechnology & life science, Banks, Diversified financials, Insurance, Technology Hardware & Equipment, Telecommunication Services, Utilities, Real Estate. At present, CSE is primarily controlled by All Share Price Index (ASPI). ASPI monitors all listed companies' share price movements. Therefore this study selected ASPI as an independent variable. The study is related with secondary data collection. In this research the researcher collect data from the report of CSE and Sri Lanka health department. Data for the study relies over the period from 2020 to 2021. The researcher will analyze and evaluate the data using the software STATA version 12.

Following figure illustrates the conceptual framework developed by the researcher for this study.

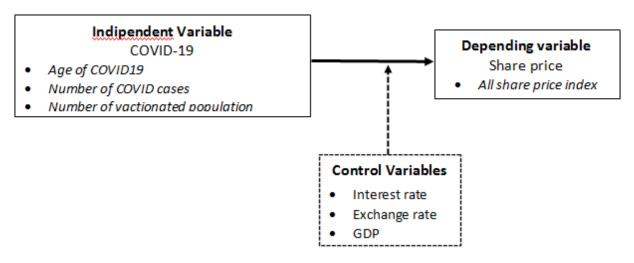


Figure 1: conceptual Model

Data Analysis and Discussion

Figure 1 shows the trend of ASPI of Sri Lankan companies listed in CSE over the last twenty-four months from 2020 to 2021. ASPI indicates a dramatic increases over the period of 24 months immediately after COVID pandemic.



Figure 2: ASPI

Regression model- forward selection criteria

Table 1 shows regression outcome of independent variable (ASPI) and depending variables (X_1 =ahe of COVID, X_2 = number of COVID cases per month, X_3 =number of vaccinated people per month, X_4 = Fixed deposit interest, X_5 = Exchange rate and X_6 = GDP). Number of COVID cases has highest R value, which explains large percentage of the total variation (84%) while lesser than 0.05 F, T values. Therefore model II selected as a most significant variable to impact on ASPI and keeping variable X_2 in the model to add another variables to identify the other significant variables.

| Model | Variable | R2 | F (sig) | t (sig) | Decision |
|-------|----------|--------|----------------------|---------------------|--------------------|
| 1 | X1 | 0.8301 | 107.54 (0.0 < 0.05) | 10.370 (0.0 < 0.05) | Highly Significant |
| II | X2 | 0.848 | 123.21 (0.0 < 0.05) | 11.1 (0.0 < 0.05) | Highly Significant |
| III | Х3 | 0.729 | 59.185 (0.0 < 0.05) | 7.69 (0.0 < 0.05) | Highly Significant |
| IV | X4 | 0.301 | 9.485 (0.0 < 0.05) | -3.079 (0.0 < 0.05) | Significant |
| V | X5 | 0.599 | 32.905 (0.0 < 0.05) | 5.7363 (0.0 < 0.05) | Highly Significant |
| VI | Х6 | 0.266 | 8.00940 (0.0 < 0.05) | -2.830 (0.0 < 0.05) | Significant |

Table 1: STEP 01 Regression model- forward selection criteria

Table 2 compare the regression outcome of independent variable (ASPI) and depending variable X_2 = number of COVID cases per month with the remaining variables (X_1 =ahe of COVID, , X_3 =number of vaccinated people per month, X_4 = Fixed dep interest, X_5 = Exchange rate and X_6 = GDP). In addition to the previous model age of the COVID adds highest R value, which explains large percentage of the total variation (89%) while lesser than 0.05 F, T values. Therefore model I selected as a Most significant variables to impact on ASPI and keeping variable X_2 , X_1 in the model to add another variables to identify the other significant variables.

| Model | R² | F (sig) | Variable | t (sig) | Decision | |
|--------|---------|-------------------------|----------------|-------------------------|--------------------|--|
| I | 0.8925 | 87.18 (0.0< 0.01) | X ₁ | 2.932 (0.007< 0.05) | Highly Significant | |
| | | | X2 | 3.489 (0.002< 0.05) | Highly Significant | |
| | 0.0503 | F0.660 (0.0 × 0.01) | X2 | 4.126 (0.0004< 0.05) | Significant | |
| ii | 0.8503 | 59.669 (0.0< 0.01) | Х3 | -0.511 (0.6141> 0.05) | Not Significant | |
| ::: | 0.8770 | 74.917 (0.0< 0.01) | X2 | 9.918 (0.0004< 0.05) | Highly Significant | |
| iii 0 | 0.8770 | | X4 | -2.20960 (0.0383< 0.05) | Highly Significant | |
| | 0.05035 | 85025 59.62 (0.0< 0.01) | X2 | 5.9323 (0.0004< 0.05) | Highly Significant | |
| iv 0.3 | 0.85025 | | X5 | 0.497 (0.6242> 0.05) | Not Significant | |
| v | 0.0763 | 74.420 (0.0< 0.01) | X2 | 12.081 (0.0004< 0.05) | Highly Significant | |
| | 0.8763 | | X6 | 2.17525 (0.0411> 0.01) | Significant | |

Table 2: Model 2 Regression model- forward selection criteria

Table 3 compare the regression outcome of independent variable (ASPI) and depending variable X_2 = number of COVID cases per month and X_1 =ahe of COVID with the remaining variables (X_3 =number of vaccinated people per month, X_4 = Fixed deposit interest, X_5 = Exchange rate and X_6 = GDP). However in addition to the previous selected independent variables no any new variables add significant value to the model. Therefore model I in second table is selected as a fixes model to forecast the share price in long term

| Model | R ² | F (sig) | Variable | t (sig) | Decision |
|-------|----------------|----------------------|----------------|-----------------------|--------------------|
| | 0.902 | 61.84 (0.00< 0.01) | X ₁ | 3.2798 (0.003 < 0.05) | Highly significant |
| 1 | | | X ₂ | 0.0976 (0.923> 0.05) | Not significant |
| | | | Х3 | 1.4471 (0.163> 0.05) | Not significant |
| | | | X ₁ | 1.7666 (0.092> 0.05) | Not significant |
| П | 0.89366 | 56.030 (0.00< 0.01) | X ₂ | 1.8643 (0.077>0.05) | Not significant |
| | | | X4 | 0.4669 (0.6455> 0.05) | Not significant |
| III | 0.900 | 60.135 (0.00< 0.01) | X ₁ | 3.1637 (0.0048<0.05) | Highly significant |
| | | | X ₂ | 3.7150 (0.0013<0.05) | Highly significant |
| | | | X5 | -1.241 (0.2286> 0.05) | Not significant |
| | | | X ₁ | 2.203 (0.039< 0.05) | Highly significant |
| lv | 0.9005 | 60.3421 (0.00< 0.01) | X ₂ | 3.7074 (0.001< 0.05) | Highly significant |
| | | | Х6 | 1.2682 (0.219> 0.05) | Not significant |

Table 3: Model 3 Regression model- forward selection criteria

As per the selected variables through forward regression model the equation Y=4679.14+130.71x1+0.005 x2 developed to forecast the long term share price in Sri Lanka.

| | | Summary | output / | | |
|-------------------|--------------|----------------|-------------|-------------|--------------|
| Regression | statistics | | | | |
| Multiple r | 0.944726914 | | | | |
| R square | 0.892508942 | | | | |
| Adjusted r square | 0.882271698 | | | | |
| Standard error | 713.2811143 | | | | |
| Observations | 24 | | | | |
| Anova | | | | | |
| | Df | Ss | Ms | F | Significance |
| Regression | 2 | 88711716.37 | 44355858.18 | 87.18254362 | 6.75164e-11 |
| Residual | 21 | 10684168.91 | 508769.948 | | |
| Total | 23 | 99395885.28 | | | |
| | Coefficients | Standard error | T stat | P-value | |
| Intercept | 4679.137575 | 392.8229111 | 11.91156993 | 8.34481e-11 | |
| Age of corona | 130.711539 | 44.57552975 | 2.932360866 | 0.007958561 | |
| COVID case | 0.005211284 | 0.001493265 | 3.489859301 | 0.002183947 | |
| | | | | | |

Table 4: summary table

Conclusion

This paper presented a predictive model to forecast long term stock prices based onforward regression model. The proposed model is suggested to consider number of COVID cases and age of COVID to measure the share price i long term after COVID pandemic. The main contribution of our paper is to apply a new model to forecast share price by investors to make effective decision.

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Assessing the Impacts of Covid-19 Pandemic on Poor in Fragile Economies: An Empirical Evidence From Afghanistan

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Abstract

The Covid-19 virus, which has come as a great shock to human existence, underscores society's reliance on economics, both at national and international levels, while addressing structural inequalities in all affairs of lives from health to economics, and from security to social protection. In 2019 and 2020, the Covid-19 pandemic has overshadowed the economic outlook in a way that no one could have predicted, and the situation may only get worse if people do not act quickly and make practical decisions. According to the world economic prospects, the COVID-19 may push an additional 83 to 132 million people to the ranks of the undernourished in 2020 (WFP, 2020). The situation on this account is particularly worse in Afghanistan. Virtual Covid-19 pandemic situation during the past two years dealt serious setbacks to its social, cultural, economic and health institutions. The present study will assess the impacts of Covid-19 on health, employment, and food state of the poor in Afghanistan as an evidence for the vulnerability of fragile economies.

Keywords: Afghanistan, Covid-19 pandemic, Lockdown, Poverty, Food security, Slum area, Inequality, Job, Livelihood

Introduction

The initial case of Covid-19 pandemic was identified in Wuhan China in 31 December 2019; following swift escalation in early 2020. The World Health Organization was enunciated a social health emergency of international concern at the end of January, and a pandemic on 11 March (WHO,2020). A universal epidemic manifests itself in different ways in various countries, and it has become quite clear that the adoption of a set of universally standardized interferences can have drastic consequences for poor people in penurious areas. The specific concern is how these interferences will work in dense populated and low resource areas, as they compelled to remain home for mounts under lockdown rules, most of unorganized laborers have lost all their daily wage, as they are unable to work from home (SIGAR, 2021). These workers are neither insured nor funded by any national or international institutions during lockdown session. Especially in areas where lockdown is very strictly implemented by the authorities, these workers cannot even seek help from friends and relatives (CSO, 2022).

The identification of 18 cases of corona virus pandemic in Afghanistan began in 03 January 2020 in Herat province, bordered with Iran, but immediately no formal lockdown announced by the government. On February 7th 2022 there have been 166191 confirmed cases of Covid-19 with 7432 deaths reported to WHO. As of first February 2022, a total of 5,152,297 vaccine doses have been administered (CSO, 2022). When the incidents of Covid-19 in Herat province increased, and also appeared in Kabul city, the government announced Lockdown for 20 days on 25 March 2020 and repeatedly extended for many periods. Following the escalation of the Covid-19 incidents in the country, the government assigned the police to implement tight social distance, leaving whole markets and streets vacant in the cities and closing most of the shops except pharmacies and groceries (MoH, 2020).

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Afghanistan is an example of the multiple strikes that most of the economies have endured due to Covid-19 pandemic, and for the slowness of the internal disease and efforts to curb its outbreak, a drastic decline occurred in flow of remittances and exports which resulted in a high level of poverty. Since October 2020, the impact of the Covid-19 spread has been vigorous, with 7432 deaths and 162750 of confirmed infections, many of which are not serious but may have lasting health effects (CSO, 2022). The case burden is mostly focused in high- and middle-income societies. countries with low level of income, have mostly seen low outbreak of the virus, due to rapid and immense social health proceedings taken in these places. Obviously, these measures, have had important economic effects. Most research on the impacts of Covid-19 on the economy has shown that the disease has increased poverty and inequality in society and can be referred to as the "disease of poverty and the disease of inequality." The imposition of certain limitations such as University and School shut down, international travel restrictions and other interferences have effected employment, trade and production. All of these features are expected to influence endeavors to convince that no one is left behind, attempts that were already off track before the disruption of the pandemic (MoH, 2020).

The Afghan government's low level of capacity and negligible social healthcare facilities have prevented Afghanistan's capability to control the covid-19 pandemic, with just 15 percent of the people fully vaccinated. However, the effect of pandemic on Afghan poor segment has been a *chain reaction* impact throughout the country, as 44.5 percent of the people were below the poverty line (US\$1per day) before the prevalence of covid-19 in December 2019. So that, the poverty situation become more deteriorated with the swift spread of covid-19 and it further pushed the poor below the poverty line (Haider, 2017).

Review of Literature

The scientific research related to the important topics, requires review of studies conducted by researchers on the subject under discussion and their findings briefly be mentioned. The present study is reviewed some of the literatures related to the impact of covid-19 of different aspects of the lives of the people around the world.

Antonio Guterres (2021), found that the epidemic was pushing marginalized groups into extreme poverty. "The global severe poverty rate has risen for the first time in more than 20 years, with 119 to 124 million people being driven into extreme poverty by 2020," the UN secretary-general said in a preface to the 2021 summit.

Hussein Ziller-Rehman (2021), in his research found that an estimated 19.54% of Bangladesh's population has been driven into poverty. In April 2020, it was under severe pressure, as it had gently improved, but the last quarantine, which was applied in early 2019, reversed the recovery trend.

WTO (2020), In its report released in 2020 mentioned that the first case of corona virus pandemic (Covid-19) was recognized in late December 2019. Following a swift escalation in early 2020, a social health emergency of international concern was announced an epidemic by the WHO on March 11. It also shows that a global pandemic manifests itself in different ways in different countries, and it is quite clear that adopting a set of universally standardized interventions can have severe consequences for the poor people in the poor regions.

Bank et al. (2021), they found in their research work that the majority of the disabled group remain unemployed and when they are employed ,it is in the informal sector. In an epidemic and crisis like situation such as Covid-19, which has affected the global economy, the disabled group remains vulnerable and homeless, relying on informal income.

Haider Hakim Mohd. (2017), found that in Afghanistan, there are many attitudinal, structural and social restrictions that impede the use of health and social services by people with disabilities. There is no shortage of inclusive health care facilities for the disabled and a skilled health workforce that can provide adequate health services to people with disabilities. Therefore, a natural shock such as storms, earthquakes, droughts and pandemic diseases can drag these vulnerable people into the poverty circle.

Objective of the study

The present study will assess the impacts of Covid-19 on the life of poor segment of population in Afghanistan over the past two years 2020-2022.

Methodology

To assess the impact of the Covid-19 epidemic on the poor in fragile economies such as Afghanistan, the present study sought to collect data from a sample of 50 people who were purposefully selected from slums and sidewalks in Kabul city. The study attempts to explore how the covid-19 has affected the job and livelihood of these individuals, and specifically on their potential to escape extreme poverty. The data collectors have tried to removed all personal identification signs to ensure anonymity for the respondents. This study has also used a semi-structured questionnaire with several sections to explore various places in the city, including the effect of Covid-19 pandemic on poor. Because of the certain restrictions in Kabul by the Taliban, interviews were carried out by Mobile phone rather than in person from 15 January to 30 January 2022. This means that the responses by the interviewers reflect the early stages of the Covid-19 reaction. Despite our study is relied more on this primary data which has been collected from slum and pathway areas, the study is used the secondary and tertiary data released by International institutions and from various published, unpublished and electronic sources.

Poor in the claws of Covid-19

As Covid-19 continues to surge from late 2019, Afghanistan's poor people who constitutes 90 per cent of the population experience increasing instability such as job losses, loss of income sources, deprivation from international aids due to full withdrawal of US and NATO troops from Afghanistan, and many social and economic restrictions imposed by the Taliban who captured Kabul in a military offense in August 2021. One of the redundant impacts of this epidemic is the effect on poverty in Afghanistan. However, in 2020, the economy shrank by 1.9 percent and the poverty rate jumped from 41.6 percent to 45.5 percent, with more than half of the population living below the poverty threshold(CSO, 2022). These higher levels correspond to a remarkable increase in food insecurity, as suppliers increased prices in response to trade buriers. Although, The WB and USAID initiatives vows to further develop humanitarian assistance endeavors for Afghan poor people.

The Cain Reaction: How Poverty Affects Food Insecurity

Food insecurity is part of a chain reaction as covid-19 continues to surge throughout the country, poverty and food insecurity levels gone up as more people lost their jobs and fall into unemployment, this scenario makes people unable to buy enough quantity of food because of a prices rise. As per the information released by Special Inspector General for Afghanistan Reconstruction, both Covid-19 pandemic virus and rising urban poverty has left 16.9 million Afghans in crisis and emergency levels of food insecurity, out of which 5.5 millions are malnourished, which has severely affected their health (SIGAR,2020). The rise and effects of Covid-19 on poverty and food insecurity in Afghanistan, is partly due to the early closure of borders. In March 2020, Pakistan as a major source of imports and exports closed its border to Afghan traders to prevent the spread of the corona virus pandemic, leading to food shortages and price rise in the country. Despite the borders reopened in July 2020, but the initial closure of the borders was disruptive as a result of which nearly half of children under the age of 5 are experiencing acute malnutrition (CSO, 2022). Several Afghan civilians have illegally sold their organs (kidney) to put food on their tables and pay for medical treatment. This infrastructure and the combined economic pressures show the need to help Afghanistan.

Empirical Evidence

The primary reaction to the lockdown, declared by the government of Afghanistan as holidays, was very less effective because the majority of the people (50 per cent) is poor and depend to their daily income to stay survive with his/her family. But the longer it extended, the more challenges arisen as police and other monitoring personnel forcing the people to adhere the lockdown. Even most of the people (vendors, porters, drivers, vegetable sellers, bakeries) who had to work in the market to earn money for their families, paid bribes to police to not stop them. Meanwhile, people were roaming the cities under various pretexts and mostly were not adhering the preventive measures announced by the Ministry of Health such as (physical or social distancing, quarantining, ventilation of indoor spaces, covering coughs and sneezes, hand washing, and keeping unwashed hands away from the face, the use of face masks) to minimize the risk of transmissions (MoH,2020).

A citizen of Kabul said, "It was a pleasure for me that government announced the first lockdown. I thought it was a holiday and I would make up for the shortfall by doing business after the official holidays, but quarantine has extended now. In this period of lockdown, no family member was allowed to go outdoor for work and our food storage has finished". The prompt effect on those workers who had jobs in informal institutions was that they were lost their jobs, as one of slum residents in Kabul told that with closure of handicrafts manufactory meant that those who were already worked there were not paid. Those who depended on small businesses were no longer able to do so, and they were also physically band from trading, there were no customers. In some upscale areas in Kabul like Macroryan, Shahr-e-Naw and Wazir Akbar Khan where residents are economically well off, "It was not possible to sell of goods, If you sit in that areas, the locals say there is quarantine, you cannot sit here, moreover, those who are rich stay at home and do not go out too much," said one walk side seller respondent. Given the strict implementation of lockdown by police, one of the vegetable sellers, who had five children, stated that "I earned 200 Rupee a day and paid 50 Rupee for the traffic police to allow me to sell off on the roadside. However, a large amount of vegetables was perished because there was less buyers". One significant issue obtaining from entire of our interviews was that whether adapting lockdown by some law enforcement officials to prevent the rise of the corona virus,

caused any violence? A vendor in Kabul observed, "If I will stand on the road side, agents report to the police, the police will come and beat us". Another person from the same place said, how he had recently reopened his shop, but he complained that the "Police disturbs me a lot, and takes two-three times daily money from me and tell me to stop selling and close you shop".

One of the drivers in Kabul spoke of how he had driven a Taxi for a week, said that, " I had to spent "Rs.5000 for the treatment of my hand as the traffic police beat me with stick and broke my hand and also, I paid Rs.1000 as a fine for breaking the lockdown rules". A total of 50 poor people interviewed shared their experiences about the worst condition of Covid-19 pandemic and how the lockdown was implemented badly by the police in the first phase of lockdown in the months of April and May 2020. No money at the most basic level means no food, participants in our data set emphasizes that having no income means that people have to change what and how much they eat. A resident of slum in Kabul city mentioned that "we cannot turn on our stove for many days, because we have to substitute it for wheat flour. Since there is no family income and we give priority to flour as it is cheaper and at today's market price each kilogram of flour costs Rs. 53 and each kilogram of rice costs Rs.130. A resident of the same area told that "we ate meat every week, now we eat poor foods such as dry bread and tea, mashed potatoes, fried potatoes, thin pulses. When the lockdown was extended, I started reducing family expenditure, whereas before I used to spend Rs.500 per day but now I spend only Rs.100 daily. We currently have no source of income and we have to eat less, that's how we cope with lockdown.".

While others have seen how lockdown has created barriers for physical access to food. "We are unable to purchase food because there is no shop or market nearby. Additionally, during the lockdown the supply of vegetables decreased and obviously the prices of all vegetables increased so that I can't afford to purchase my required vegetable due to high level of prices" said a resident of Kabul.

Conclusion and recommendation

The study simply concludes that the effect of Covid-19 pandemic reaction has been forecast able for slum residents of Kabul city. Loss of job opportunities has affected people's capability to buy their basic needs such as food and medicine. Journey limitations have affected availability of fresh food, and tough implementation of lockdown rules has had a significant cost for many people specially for the poor and marginalized section of the Afghan society. It is estimated that there are currently more than 20 million people living in poverty, including those driven into extreme poverty by Covid-19, of which 18.5 millions are at high economic risk (UN, 2022). However, the government did not implement the lockdown rules properly because it provided the opportunity of bribery for police, also the government did not prepare any assistance package to the poor. Even foreign aids were wasted by corrupt authorities of the former government. Because when poor people were looking for help, it was difficult for them to decide where to go and who to ask for help. Where aids are allocated for the needy people, it mostly varies in size and alternation of distribution. In such a pandemic situation, poor and marginalized sections must be given the first chance and treated with honor and tribute. Instead, what we see is that they are thrown behind. This has compelled many lowincome workers to move to the road side in search of income, notwithstanding the risk to their health from possible exposure to Covid-19, and exposes them to prosecution and trouble.

For this background, and as part of the response to the global epidemic, we call for:

- 1. Increasing the world response and special political undertaking to rise funding to boost urgent humanitarian response capacity and safeguard national governments in supporting their citizens.
- 2. Convincing the households that they have an alternative of feeding their children to hamper malnutrition and maintain their health condition. Cash and credit contributions to urban poor that have no other means of subsistence, should be a priority. In Afghanistan, money delivery furnish a viable selection as food supply and basic necessities market are as yet active.
- 3. Considering the effect of the pandemic response on the extremely poor and marginalized sections, community and public authorities need to know the scale of the matter, convincing that it prepares secure, sober, honorable and explicit assistance where it is needed. The law implementation has an obligation to protect the poor and marginalized people and help them to get access to any national and international assistance.
- 4. There are many sporadic international aid programs in Afghanistan, so the Covid-19 pandemic has the requirement to establish a reliable and protective public support system. As soon as income resources affected due to Covid-19 pandemic, government's programme should safe families from applying negative coping strategies and the risk of poverty .
- 5. In addition to the quick response, ensure a glance on boosting activities to elevate sustainable means of living as part of economic recovery. Now there is an opportunity to protect vulnerable segment to make new skills and subsistence.

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Covid-19 and Its Impact on Poverty in Tajikistan

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Abstract

Poverty is a condition in which a person or community lacks the financial resources and essentials for a minimum standard of living or poverty means that the income level from employment is so low that basic human needs can't be met. In the Central Asian nation of Tajikistan, which lies at the heart of Afghanistan, Pakistan and China, the effects of the COVID-19 pandemic have hit the population particularly severely. Tajikistan has been facing economic difficulties for years. Moreover, with the loss of employment that the COVID-19 pandemic has caused, thousands of families are struggling to make ends meet. Tajikistan suffers a severe COVID-19 outbreak, the country faces a looming blow from the worst global economic outlook in generations. During pandemic more than 41 % of households reported reducing their consumption of food (up nearly 17 percentage points over 2019) and among those households seeking any medical care and 17.5 percent report being unable to obtain it, less than 2 percent of household report newly receiving any financial or in-kind support from government since the outbreak. Only about 33 percent of households report that their children engaged in educational activities following mandatory school closures. Work stoppages and unemployment spiked during pandemic accompanied by a 70 percent decline in open job listings in comparison to January 2020, and official statistics report accelerating food price inflation. The COVID-19 pandemic had a significantly adverse impact on Tajikistan's economy and increased the level of poverty and health sector pressures, weaker consumer demand, and reduced investments. This paper depicts the impact of Covid-19 on poverty and different sectors also furnish the policy framework of government of Tajikistan in this regard.

Keywords: Covid-19, Tajikistan, Poverty, Economy, Pandemic, Remittances

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Covid-19 Pandemic Related Studies On Impact Of Remote Working On Employees: A Systematic Review

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Abstract

The COVID-19 pandemic has had a disastrous impact on organizations and changed the method of working for every employee. Since the beginning of the pandemic, researchers have been researching and publishing their studies of the impact on both remote working and non-remote working employees. The number of articles on this area is steadily increasing but because of the absence of any systematic literature reviews, it remains unclear on what aspects have already been studied and what aspects need to be investigated. The study systematically reviews existing research on the impact of remote working on employees during COVID-19. Through a systematic search, a total of 30 relevant articles which were published before September 2021 were chosen. Findings reveal that factors can be categorized as psychological, behavioral, organizational, physical, emotional, teleworker, family-related, and COVID-19 related. This study also describes the methodologies used, context, and theories used in each research. The analysis reveals that there is a lack of empirically designed and theoretically grounded studies in specific sectors such as the information technology (IT) sector, lesser studies done in much smaller and developing economies where the working practices, culture, and social norms are much more different than countries with developed economies. Moreover, the analysis reveals that most studies have focused on employees working in large-scale established companies where job security is somewhat high while employees in SMEs with lower job security have been largely ignored. It also reveals its better to get the viewpoints of lower-level employees and senior managers using interviews to get more insights about their experience. Especially when it comes to senior-level employees, the challenges they face are different than the challenges faced by lower-level or middle-level employees. By considering the findings of these articles alongside research on the COVID-19 pandemic, this study offers research questions and directions for further investigation. These directions can guide scholars in designing and conducting impactful research on an ongoing problem.

Keywords: COVID-19 pandemic, PRISMA framework, Remote working, Systematic review

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The Impacts of Covid-19 Pandemic on the Tourism Sector in Karnataka – Options for a Sustainable and Resilient Recovery

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Abstract

India is a geographically vast country and is a tourist delight with a rich historical background and cultural heritage. Tourism is an important economic activity and also a one of the strongest pillars of the economy. In India, travel and tourism industry has been a remarkable contribution to the country's GDP. Not only GDP, but also tourism has always a huge source of foreign exchange earnings and significant contributor to an employment generator for the country. The sudden outbreak of the Novel Corona virus (Covid-19) around the globe has become a strong breaker in the tourism sector because of the pandemic situation around the globe will become a cause of changes in behavior and preferences of the tourists. Due to this virus threat, tourists have cancelled their programs and this fear has dropped down the tourist graph. With the large scale travel restrictions, quarantines, social distancing and lockdown, Covid-19 have given a major impact on the economic development worldwide. Due to resulting travel restrictions and drop in demand, Covid-19 pandemic also impact tourism sector significantly. Hence, this study attempts to understand the tourism sector role and importance in Karnataka's economy and examine the impact of Covid-19 pandemic on the Karnataka tourism sector. For this study purpose, secondary data have been collected from the official websites and descriptive statistical techniques have been used for testing the statistical significance of the impacts of COVID-19 pandemic on the Tourism Sector in Karnataka. The results indicate there exists a significant difference in the development of the tourism sector, gives us a clear message that we should undoubtedly rethink the plans in more structural and more viable ways to reach a position to absorb any kinds of uncertain threats from the external environment.

Keywords: Covid-19, Tourism Sector, GDP, Economy etc.,

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A Multi-Case Study Of Survival And Failure Of Startups During Covid19 Pandemic

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Abstract

India is a developing country and has the utmost potential to come on the list of the next proud developed countries. Many reforms are taking place keeping this in mind and the result has also shown that India has become a favorite place for the e-services provider to the world. The startup is the most widespread term in the present era. It has a great impact on the economy of the country. Entrepreneurs seek help in three categories - Technical help, Financial help, and Managerial help. Institutions like MPFC, SIDBI, MSME are there to aid startups, some of the private supports such as Angel Investors, Venture Capitalists are also serving the purpose. But when COVID 19 came as a curse on mankind, many have lost their jobs and many have to shut their business down. The objective of this paper is to target the strategies applied by the different startups which will lead to their survival or failure. A multi-case study approach under the Qualitative methodology has been applied and the factors responsible for the failure and success of startups have been discussed. Root Cause Analysis has been done to verify the emerged theories.

The research comes up with the four major factors:

- 1) Managerial
- 2) Economic
- 3) Competition and
- 4) Financial.

These factors are expected to be useful for the Government, Businessmen, Young Entrepreneurs, and the policymakers of the country.

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Contractual Provisions Related to a Pandemic Situation (COVID-19) in Construction Projects: Review FIDICs and SBDs

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Abstract

The construction industry cannot be exempted, as it has faced huge issues due to COVID-19, similar to other sectors, and thus the pandemic created several challenges for the construction stakeholders. Among them, contractual challenges, which have legal implications, can lead to many disputes and contractual challenges raised to assist contractors in claiming a loss, expenses, and extension of time. Nevertheless, the word 'pandemic' is not available in many forms of construction contracts to provide specific contractual provisions against the challenges arising with COVID-19 in the construction industry. Pandemics, which may occur at any time, were present in the 1820s and 1920s, and COVID-19 still prevails. Therefore, there must be adjustments to these contractual provisions in the standard form of construction contracts to safeguard all parties to the contract. Hence, this paper will review the available contractual provisions in the common standard forms of construction contracts related to a pandemic. It aims to be aware of the construction stakeholders' long-term impacts due to the deficiency of specific contractual provisions.

Document review was the primary data collection tool and internationally popular form of contract FIDIC, and locally popular form of contracts SBDs were reviewed and analysed. Consequently, contractual provisions for pandemics in a few standard forms of construction contracts were synthesised. The documentary review identified main contractual provisions such as Adjustments for Changes in Legislation/Law, Force Majeure, Compensation Events, Right to Claim, Extension of Time, and Exceptional Events. The next step will investigate appropriate adjustments to the existing contractual provisions to overcome losses for construction stakeholders.

Keywords: Pandemic, Contractual, Challenges, Provisions

Introduction

Aviantara (2020) brought up the 'pandemic' as a critical risk factor that ought to discuss within the construction industry. Porter (2020) reported that multiple questions remain within the construction industry with the pandemic situations that have not been answered yet. Moreover, the current construction projects have been adversely influenced by the pandemic 'COVID-19', and the virus will continue affecting the other industries also for some time in the future (Ataei et al., 2021). Therefore, understanding and analysing the consequences of pandemics to the construction industry is essential because it plays an extensive role in economic development (Laing, 2020). Simultaneously, Zamani, Rahman, Fauzi, and Yusof (2021) have investigated the fundamental needs of having applicable approaches to overcome the negative impacts of pandemics to obstruct an economic downturn in countries. Therefore, construction stakeholders should be able to answer questions such as, what are the unprecedented impacts and consequences of COVID-19 on the construction industry? and what are the absolute recommended practices to make secure the construction industry against a pandemic situation? (Porter, 2020).

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Often, unforeseen or unexpected situations such as pandemics or adverse weather conditions can cause cost overruns, delays, and disruptions in job site activities (Siemiatycki, 2015). Therefore, the COVID-19 outbreak has negatively impacted the contractors and the employers who are financing construction projects (Bailey et al., 2020). Along with the spread of the Coronavirus, the construction stakeholders had to deal with several risks due to various uncertainties in construction projects (Albertini, 2020).

Alenezi (2020a) stated that a payment delay by the main contractor to the subcontractors was one of the issues the construction industry faced during the COVID-19 pandemic. According to the author, there is a possibility to fairly clear the issue by discussing together with all parties involved. Risks cannot be wiped out, yet may be limited, transferred, or held (Mills, 2001). The coverage is termed 'contingency', which is the amount added by the contractors to the base estimate while bidding for projects (Lutz, 2020). The particular offer of the bidder and the contingency amount should have the capability to cover contractors' potential risks and thereby avoid future losses up to a considerable extent (Sonmez, Ergin, & Birgonul, 2007).

Is this COVID-19 being a Force Majeure event? It is not listed under the relevant Sub-Clause in many forms of contracts. Hence, this paper aims to review available contractual provisions related to the construction industry in a pandemic situation, including COVID-19.

Accordingly, the paper is structured as follows. First, justification of the research method adopted, followed by the literature review presented on contractual issues in the construction industry due to a pandemic. Finally, the document review results and the conclusions drawn from the study are discussed.

Research Methodology

A researcher can conduct research upon several pathways. According to Kumar (2011), the documentary review is the most common secondary data collection method. Since this study focuses on contractual provisions in standard forms of contracts, documentary review under the qualitative research method was used to realise the research aim. The standard form of construction contract published by the International Federation of Consulting Engineers (FIDIC) is the most widely used international form of construction contract globally (Seifert, 2005). Standard Bidding Documents (SBD) specific to Sri Lanka and FIDIC which are popular internationally, were incorporated into this document review.

This study review included the FIDIC 1999 red book and FIDIC 2017 red/yellow/silver books from FIDIC book series. Among the locally popular SBD series of documents, SBD 01 (use for works contracts between Rs. 10.0 million and Rs. 100 million), SBD 02 (use for works contracts over Rs. 100 million), SBD 03 (use for works contracts up to Rs. 10 million), and SBD 04 (use for works contracts where the contractor is responsible for the design and construction of the works on specified approvals obtained from the Employer) were incorporated to find contractual provisions in this study.

Literature: Contractual Issues due to Pandemics

As mentioned by Ogunnusi et al. (2020), the construction industry has been substantially affected by COVID-19, and construction stakeholders have paid full attention to standard forms of contracts. World Health Organisation's (WHO) Director-General categorised the new

Coronavirus (COVID-19) as a pandemic. With the confusion of dealing with a pandemic and the construction projects, stakeholders searched for construction-related guidelines (Budds, 2020).

Most governments have issued guidelines and best practices to prevent worksites from COVID-19 (Afkhamiaghda & Elwakil, 2020). Several countries have issued proposals to ensure job site safety during the pandemic period (Zheng et al., 2021). Jreidini (2020) mentioned that several challenges and constraints can directly be set upon the construction industry, including project time and cost increment due to disruptions in site works and material supply due to a pandemic. Most of researchers identified contractual challenges which have a huge connection with escalation of project cost and time due to COVID-19. Most researchers identified contractual challenges that strongly connected with project cost escalation and time due to COVID-19. Moreover, the literature identified disruption in project works, issues in the supply chain, labour shortage and productivity loss, and delay payments as common contractual challenges. Bailey et al. (2020) mentioned that the COVID-19 outbreak should be contractually considered under the category of 'Force Majeure'. It should be concerned under 'changes in legislations' to investigate the real influence on the construction industry properly. Nevertheless, standard forms of contracts such as FIDIC will ordinarily provide provisions for the expansion of time but not pay compensations for the costs, which occurred due to pandemics under Force Majeure events (Ogunnusi et al., 2020).

Force Majeure clauses typically contain a list of events that will constitute force majeure. Since this clause does not contain specific wording applicable to COVID-19, the construction party seeking to rely on the force majeure clause will need to carefully consider the wording of the clause to determine whether any COVID-19 related disruptions might constitute a force majeure event. For example, does the contract contain wording such as "or any other causes beyond our control" after the list of specific force majeure events? (Rathbone, Grenfell, & Wright, 2020).

As mentioned by Kabiru and Yahaya (2020), the test of force majeure event would have to satisfy the following criteria:

The event must be beyond the reasonable control of the affected party,

The affected party must have taken all reasonable steps to seek to avoid or mitigate the event or its consequences, and The affected party's ability to perform its obligations under the contract must have been prevented, impeded, or hindered by the event.

FIDIC does not define the terms "epidemic" or "pandemic". However, the World Health Organisation [WHO] (2022) defines *epidemic* as:

"The occurrence in a community or region of cases of an illness, specific health-related behaviour, or other health-related events clearly in excess of normal expectancy".

Further, WHO does not define a "pandemic", but it provides the following: "a pandemic is an epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people".

Therefore, it is a current requirement to pay attention to contractual provisions available in the standard forms for situations like COVID-19 since the term "pandemic" is not available there.

Findings of Document Review

This section provides contractual provisions related to a pandemic situation regarding international and local forms of contracts. Accordingly, as the first step, referring to available forms of contracts, applicable contractual clauses were identified and presented in Table 1.

| Clause | FIDIC 1999 (Red) | FIDIC 2017 (Red/Yellow/ Silver) | SBD 1 | SBD 2 | SBD 3 | SBD 4 |
|---|---------------------|------------------------------------|-------|-------|----------|----------|
| Adjustments for Changes in Legislation/Law | 13.7 | 13.6/13.7 | 45.1 | 13.6 | | 13.6 |
| Force Majeure | 19.0 | 19.0 | | 20.0 | 12.2 | 20.0 |
| Compensation Events | | | 44.1 | | | |
| Right to Claim | 20.1 | 20.1 | | 19.1 | 9.4 | 19.1 |
| Extension of Time | 8.4 | 8.4/8.5 | | 8.4 | 6.3 | 8.4 |
| Exceptional Events | | 18.0 | | | | |

Table 5: Applicable Contractual Provisions for a Pandemic

Moreover, Table 2 provides a detailed description and entitlement of each clause that refers to a pandemic situation.

| Entitlement | Form of Contract |
|---|------------------|
| When the government announced 'Work from Home' or 'imposed curfew', and prevented site operations, as per the conditions of the form of contract, the Contractor can maintain a claim under Sub-Clause 45.1 [Change in Law], prevention of work due to governmental directives and/or action following the vested power to the competent authority. | |
| • In this situation, the Contractor can claim only associated Cost due to changes in legislation because the Sub-Clause 45.1 is silent about the adjustment to Time. | ICTAD/SBD/01 |
| Therefore, the Contractor has the liberty to claim an Extension of Time for Completion, according to Sub-Clause 44.1 (m) [Compensation Events], for the prevention of work due to governmental directives and/or action in accordance with the vested power to the competent authority. | |
| When the government announced 'Work from Home' or 'imposed curfew', and prevented site operations, as per the conditions of the form of contract, the Contractor can maintain a claim pursuant to Sub-Clause 13.6 [Adjustments for Changes in Legislation], prevention of work due to governmental directives and/or action in accordance with the vested power to the competent authority. | |
| • In this situation, the Contractor can claim both Extensions of Time for Completion and associated Cost, due to changes in legislation. | ICTAD/SBD/02 |
| • The Contractor can maintain a claim pursuant to Clause 20 [Force Majeure] due to the event or circumstances 'beyond a Party's control'. | |
| • If the event is a Force Majeure and the Contractor suffered delay or incurred Cost, the Contractor can claim both Extensions of Time for Completion pursuant to Sub-Clause 8.4 [Extension of Time for Completion] and associated Cost under Sub-Clause 19.1 [Contractor's Claims]. | |

| Entitlement | Form of Contract |
|--|---------------------------------|
| When the government announced, 'Work from Home' or 'imposed curfew', and prevented site operations, as per the conditions of the form of contract, the Contractor can maintain a claim pursuant to Sub-Clause 9.4 [Right to Claim] and 6.3 [Extension of Time], prevention of work due to governmental directives and/or action in accordance with the vested power to the competent authority. If the event is a Force Majeure, Sub-Clause 12.2 [Force Majeure] is silent about the Extension of Time for Completion and associated costs related to a respective event. | ICTAD/SBD/03 |
| | |
| When the government announced 'Work from Home' or 'imposed curfew', and prevented site operations, as per the conditions of the form of contract, the Contractor can maintain a claim pursuant to Sub-Clause 13.6 [Adjustments for Changes in Legislation], prevention of work due to governmental directives and/or action in accordance with the vested power to the competent authority. | |
| • In this situation, the Contractor can claim both Extensions of Time for Completion and associated Cost, due to changes in legislation. | ICTAD/SBD/04 |
| • The Contractor can maintain a claim pursuant to Clause 20 [Force Majeure] due to the event or circumstances 'beyond a Party's control'. | |
| • If the event is a Force Majeure and the Contractor suffered delay or incurred Cost, the Contractor can claim both Extensions of Time for Completion pursuant to Sub-Clause 8.4 [Extension of Time for Completion] and associated Cost under Sub-Clause 19.1 [Contractor's Claims]. | |
| • When the government announced, 'Work from Home' or 'imposed curfew', and prevented site operations, as per the conditions of the form of contract, the Contractor can maintain a claim pursuant to Sub-Clause 13.7 [Adjustments for Changes in Legislation], prevention of work due to changes in the Laws or such interpretations, made after the Base Date. | |
| • In this situation, the Contractor can claim both Extensions of Time for Completion and associated Cost due to changes in legislation. | |
| The Contractor can maintain a claim pursuant to Sub-Clause 8.4 (d) 'Unforeseeable shortages in the availability of personnel or Goods caused by an epidemic or governmental actions' or Clause 19 [Force Majeure] due to the event or circumstances 'beyond a Party's control'. | FIDIC (1999) Red Book |
| • If the event is a Force Majeure and the Contractor suffered delay or incurred cost, the Contractor can claim both Extensions of Time for Completion pursuant to Sub-Clause 8.4 [Extension of Time for Completion] and associated Cost under Sub-Clause 20.1 [Contractor's Claims]. | |
| • When the government announced 'Work from Home' or 'imposed curfew', and prevented site operations, as per the conditions of the form of contract, the Contractor can maintain a claim pursuant to Sub-Clause 13.6 [Adjustments for Changes in Legislation], prevention of work due to governmental directives and/or action in accordance with the vested power to the competent authority. | FIDIC (2017) Red |
| • In this situation, the Contractor can claim both Extensions of Time for Completion and associated Cost due to changes in legislation. | Book/Yellow Book/Silver Book |
| Sub-Clause 8.5 (d) Unforeseeable shortages in the availability of personnel or Goods (or Employer-Supplied Materials, if any) caused by an epidemic or governmental actions will not be the relevant Clause when proximate cause governmental orders to prevent the pandemic. | |

| Entitlement | Form of Contract |
|--|--|
| However, this clause will be relevant if there is delay/disruption to the supply chain, n foreign supplies. | nainly |
| • Sub-Clause 8.6 [Delays Caused by Authorities] will not apply for this situation, only authority will not delay any approval other than the normal approval period. | if any FIDIC (2017) Red Book/Yellow Book/Silver Book |
| • Clause 18 [Exceptional Events] clause will be relevant if delay/disruption to supply of mainly foreign supplies. | chain, |

Table 6: Summary of Contractual Provisions

Since the word 'pandemic' is not available in standard forms of contracts such as FIDIC or SBD in Sri Lanka, construction stakeholders can get confused and argued which kind of an event is this COVID-19 and does that come under the Force Majeure Sub Clause. Most construction parties are struggling to find whether they could compensate the losses through available contractual provisions while there are pandemics such as COVID-19.

When the COVID-19 cases are reported continuously worldwide, new rules and regulations are imposed by many countries to minimise the impact of the virus spread. However, construction projects were disrupted and delayed performing contracts by the parities and additional costs have been incurred or will incur in future to the construction parties. Even though construction projects grant time extensions based on available contractual provisions, provisions given through Adjustments for Changes in Legislation/ Law cannot prevent construction stakeholders from massive additional costs that they spend with these pandemic situations.

Conclusions

Unlike typical situations, a pandemic can create a different nature in the construction job site. Therefore, it is prudent to address the contractual provisions for these challenges during a pandemic to minimise the impacts at the beginning and the end of the crisis to prepare for any future potential and learn lessons.

As per the above interpretations of a different form of contracts, it is clear that when the government impose additional regulations due to a pandemic, then the parties to the contract should comply with the clauses relevant to changes in legislation. It is the only Sub-Clause in a construction contract document where the contractor can claim for cost or time or both. Exceptional event-related Sub-Clauses like the Force Majeure clause cannot be directly applied because it does not specifically mention a Pandemic, but it says an Epidemic. Therefore, it is clear that the parties to the contract will argue for a longer time regarding these Clauses to get compensation. This will affect an ongoing construction project which started before 2019 and the new projects where the clauses are not available to tackle this COVID-19 pandemic after considering the FIDIC Memorandum or similar documents. There were Pandemics in the 1820s and 1920s; it can occur any time in the near future, and COVID-19 still prevails. Therefore, adjustments to these provisions in the form of Contracts are essential to safeguard all parties related to the construction contracts to minimise the impact from contractual challenges due to pandemics.

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Ethnic Variation in COVID-19 Mortality in Sri Lanka

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Introduction

Using available national statistics this paper examines the variation in COVID-19 mortality in Sri Lanka from March 28, 2020 to November 5, 2021 period according to ethnicity and related social and demographic variables. The objectives of the study were to identify variation in COVID-19 mortality, determine possible explanations for the observed variation and explore long-terms social consequences of the observed trends. As for the methodology, the paper undertakes a secondary data analysis of mortality data published by the Epidemiological Unit of the Ministry of Health in Sri Lanka and draws on primary data generated by a Sarvodaya study on social determinants and impacts of the pandemic in Sri Lanka conducted in 2021 (Silva, Sirikanth, Hapuarachchi and Saleem, 2021).

Findings

The overall COVID mortality trends during the three waves of the pandemic are presented in Fig. 1.

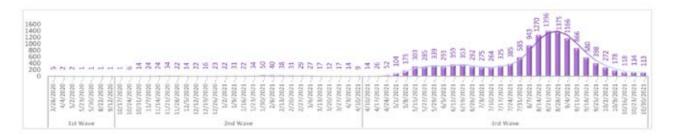


Fig. 1: Variation in COVID-19 death count in Sri Lanka by Pandemic Waves Source: Epidemiological Unit, Ministry of Health of Sri Lanka

As we can see deaths caused by COVID-19 in Sri Lanka were low in the pandemic wave 1 (from March 28 to October 3, 2020) and pandemic wave 2 (from October 4, 2020 to 12 April 2021) and increased substantially during the pandemic wave 3 (from April 13, 2021 onwards), with weakly death count exceeding 1000 deaths during the peak period of mortality rise from August 14 to September 4, 2021.⁶

As evident from Fig. 2, the percentage distribution of COVID-19 deaths during the study period among Sinhalese, Tamil, Muslim, Burgher and Others were 69.8, 13.1, 13, 3.9 and 0.1 respectively as compared to their population distribution determined at the last population census in Sri Lanka dated 2012, namely 74.9%, 15.3%, 9.5%, 0.2% and 0.1% respectively. This gives a notable overrepresentation of COVID-19 deaths among the Burghers and Muslims and

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⁶ The pandemic wave 3 stretches from April 13, 2021 onwards into year 2022, but for the purpose of the analysis pursued here, we treat November 5, 2021 as the end date of the pandemic wave 3.

underrepresentation among Sinhalese and Tamils, with population and COVID-19 mortality percentages tallying in the case of "other" category. We excluded Burghers from the remaining analysis, because of the tendency in the Epi Unit data set to merge Burghers and foreigners, perhaps explaining their exceedingly high COVID-19 mortality rate (1906) compared to other ethnic groups. We also excluded the "other" category from the main analysis pursued in this paper, because of their small number and correspondence in population and mortality distribution.

% of Population and % of COVID-19 Mortality by Ethnicity in Sri Lanka March 28, 2020 to Nov 5, 2021

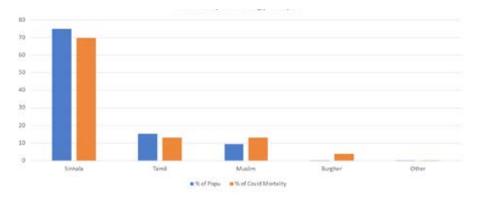


Fig. 2: Percentage Distribution of Population and Mortality in Sri Lanka in the stipulated period by Ethnic Categories Source: Epidemiology Unit, SL

The study found a higher rate of COVID-19 mortality among Muslims, followed by the Sinhalese and Tamils, with observed differences in COVID-19 mortality rate between Sinhalese and Muslims and Tamils and Muslims statistically significant at .05 level (See Fig. 3).

COVID-19 death rate in Sri Lanka per 100,000 population by Ethnicity, March 28, 2020 to Nov 5, 2021

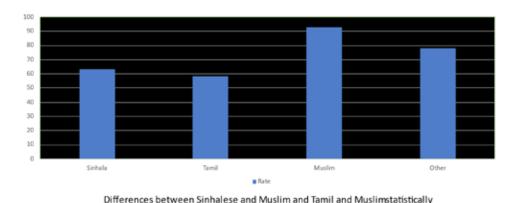


Fig 3: COVID-19 Death Rate in Sri Lanka per 100,000 population by ethnicity in the stipulated period

significant at .05 level, Difference between S and T nonsignificant

A disaggregated analysis of mortality by ethnicity, gender and age group in Fig. 4 indicates a common pattern of higher mortality in the 60 or older age group relative to younger age groups in all three ethnic groups, higher female mortality compared to male mortality in the older age group and higher male mortality in the younger age groups across the different communities. Male mortality in the economically active 30 to 59 age group is highest in the Muslim community, followed by Tamil and Sinhala communities.

% of mortality by ethnicity, gender and age group

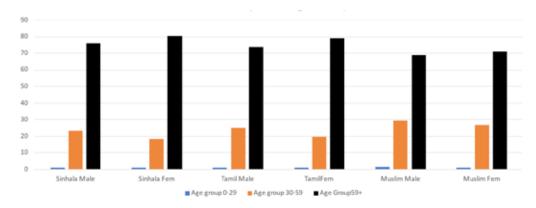


Fig. 4: COVID-19 Mortality Distribution by Ethnicity, Gender and Age Group in the Stipulated Study Period *Source:* Epidemiological Unit, SL

The study also found an interesting ethnic variation in the distribution of COVID-19 mortality among the different pandemic waves, presented in Fig. 5. The Muslims reported a disproportionately high percentage of COVID-19 deaths in the pandemic wave 1 (with Sinhalese, Tamils and Muslims reporting 64%, 0% and 35.7 percent of all deaths respectively), Tamils reported a disproportionately high percentage of COVID-19 deaths in the pandemic wave 2 (with Sinhalese, Tamils and Muslims reporting 55%, 28% and 13 percent of all deaths respectively)), and the mortality distribution among different ethnic groups, more or less, conformed to their distribution in the population by the pandemic wave 3 (with Sinhalese, Tamils and Muslims reporting 71%, 12% and 13 percent of all deaths respectively).

COVID-19 mortality changes by ethnicity in the three pandemic waves (% of COVID-19 deaths)

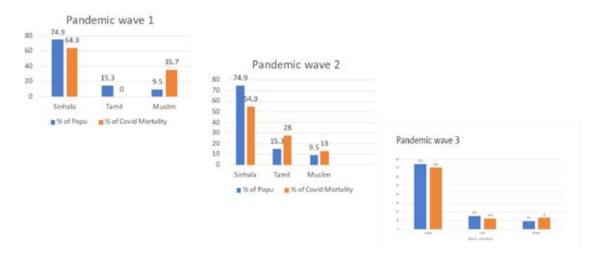


Fig. 5: Percentage Distribution of COVID-19 deaths in Sri Lanka by Ethnicity in Pandemic wave 1, 2 and 3

Social Epidemiological Explanations for Observed Variation in COVID-19 Mortality in Sri Lanka

Possible social epidemiological explanations for observed ethnic variation in COVID-19 mortality includes notable differences in religious congregations, including Muslim male congregations in local mosques for five times prayers each day, customary practices such as handshakes, hugs, drinking and eating practices during weddings and other social gatherings,

possible overrepresentation of minority communities (Muslims and Tamils) in certain types of settlements such as bazar and watte communities, occupation differences among ethnic groups particularly in respect of engagement in certain trades and informal sector activities like fish trade and payment hawking. It is significant to note here that the notable increase of COVID-19 mortality among Tamils in the pandemic wave 2 may be attributed to the higher presence of the Indian Tamil community among shop assistants in urban centres and load carriers (natami) in wholesale markets including in the fish markets that played an important role in triggering this pandemic wave.⁷ Also it must be noted here that an evangelical Christian Tamil Community distributed in the north and plantation areas reported a COVID-19 cluster in the pandemic wave 1 (See Silva 2020a, 2021). The differences in degree of compliance with health guidelines also cannot be ruled out. Finally, it must be noted that side by side with public health officials, community and religious leaders played a significant role in promoting health behaviours including vaccine uptake in minority communities in particular. This may partly explain their ability to eliminate or at least reduce the excess COVID-19 mortality among minority communities during the pandemic wave 3. It is also possible that minority compliance with health guidelines increased due to the intervention of health authorities, community and religious leaders and the ultimate removal of mandatory cremation of COVID-19 deceased in February 2021, a poorly informed state imposition during the early phase of the pandemic that was contrary to religious beliefs of certain minority communities.

Conclusions

In sum, this analysis indicates the resilience of the health care system in Sri Lanka facing multiple challenges during diverse humanitarian emergencies in the country over the past three decades and its capacity to reach out to all communities despite politically instigated and structurally reproduced divisive tendencies in society and address satisfactorily the social and cultural differences and related sensitivities in the long run. It also points out the importance of community participation in addressing social determinants of infections during current and presumably future public health emergencies. While the pandemic triggered a campaign of hate speech in social media and mainstream print and electronic media targeting specific communities particularly during the first wave of the pandemic (Silva 2020a, 2020b and 2021), there is also some evidence that humanitarian assistance provided to victims of the pandemic by faith actors, faith-based organizations and state agencies were often trans-faith in serving the affected people according to their needs rather than on the basis of their identity in a deliberate effort to diffuse intercommunity tension, possibly indicating a community-driven bottom-up peace building initiative with the pandemic increasingly identified as a common tragedy encountering the entire humankind (Silva, Zawahir, Ramasamy and Arumugam 2021, Silva, Sirikanth, Hapuarachchi and Saleem 2021). This confirms similar trends reported from elsewhere in the world as well (International Alert 2021, Obi and Kabandula 2021).

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Demographic and Socio-Economic Impact on Online Consumer Behaviour During Covid-19

J M D H K Jayamaha¹

Abstract

The behaviours and the practices of a particular community are modeled by its common characteristics. According to the Theory of Reasoned Action, demographic profile of a consumer is a key factor which determines online consumer behaviour (Ajzen et.al, 2005). Therefore, the main objective of this study is to identify the impact of the demographic and socio-economic impact on online consumer behaviour in a pandemic situation. Western province of Sri Lanka was chosen as the study area as it holds the highest online order share during 2019 while using purposive sampling method in determining the sample size. The survey was conducted using the online questionnaire method where a total of 600 responses were collected. The collected primary data were analyzed in a quantitative approach where a binary logistic regression was used to identify the impact of the demographic and socio-economic characteristics towards online purchases. The results of the model interpret the younger generations being more active in purchasing online than older generations, males being more active than female, people with higher education being more active than those with lower education. Therefore, the model and its results prove that there's a significant impact from demographic and socio-economic characteristics of a population in determining the online consumer behaviour. Therefore, this study emphasizes the importance of identifying the demographic and socio-economic differentials of online consumers and non-consumers in targeting the right consumer market. It is much important to identify the impact properly as shown by the regression analysis since the differentials seen from the outside may not predict the impact properly, which will lead the decisions taken towards the online market being wrong, impacting the survival. Furthermore, this study concludes the future of the online market of Sri Lanka as the youngest generations being identified as the highest online consumers during the pandemic situations and them having the intention in continuing their online purchases.

Keywords: Online market, Generational behaviour, Online consumer behaviour, Demographic impact. Socio-economic impact

Introduction

Covid-19 could be identified as a pandemic which caused lot of changes in the human societies. The smallest things such as interacting with people to purchasing good and services from a store was affected. The spread of Covid-19 pandemic made people to change their life styles where purchasing goods and services were only limited to online platforms. Hence, the activity or the action of purchasing goods and services over the internet was given much importance during the pandemic situation. Though people were forced to do online purchases during the first phase of the pandemic people getting adjusted to the online platforms and the online markets being expanded in the present is much visible. The E-commerce retail revenues (retail revenues of platforms such as Amazon, Ebay, Rakuten and etc.) also indicates that COVID-19 is having a major impact on e-commerce and is expected to cross \$6.5 trillion in sales by 2023 (Jones, 2020) emphasizing the positive impact Covid-19 has brought towards survival of the

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online markets. Though Covid-19 has positively impacted the online platforms the purchasing behaviours differ from person to person due to their demographic and socio-economic backgrounds. Therefore, identification of the purchasing patterns and the characteristics of the customers are important to survive in the long run (future) even after the pandemic. Hence, this study aims in identifying the impact of the demographic and socio-economic impact on online consumer behaviour in a pandemic situation as it will help the online store owners to plan their future accordingly.

Methodology

As to achieve the objective of this study 600 responses were collected within the area of Western Province, Sri Lanka as it holds the highest online order share during 2019 (Daraz, 2019). The sample of 600 responses consisted of both online consumers and non-consumers representing all four generations Baby boomers, Generation X, Millennials and Generation Z. The online questionnaire method was used in collecting the data while using a binary logistic regression in determining the impact of demographic and socio-economic characteristics towards online consumer behaviour. The sample size was determined by sending 1000 questionnaires to people who had internet access within Western Province, expecting at least a response of 40% representing 100 respondents from each generation. At the end a total of 600 responses were collected representing all four generations with a response rate of 60%. From the sample of 600 responses 458 respondents were identified as online consumers while 142 respondents were identified as non-consumers.

Results and discussion

This study was conducted to identify the demographic and socio-economic impact towards online consumer behaviour during the pandemic situation and to identify whether the results will be useful for the survival of the online market. Many studies have identified the need of infrastructure towards online markets, the higher computer literacy levels needed by the consumers and etc. but only few have identified the impact of demographic and socioeconomic characteristics. Characteristics such as generations (age), Gender, level of education, level of income, household type, marital status, employment status and ethnicity were taken in to consideration for this study. As to identify the impact a binary logistic regression model was used. logistic regression model is generally used to study the relationship between a dependent variable and a group of predictors (independent variables). A binary logistic model could be used when the dependent variable includes two responses and predictors being categorical or scale variables with two or more categories. In the case of this study the dependent variable includes two variables as either "yes" or "no" indicating to be online consumers or non-consumers. Hence, a binary logistic regression has been used in determining the online consumption with the effect of demographic and socio-economic characteristics. Therefore, in this study, being online consumers and non-consumers have been taken as the dependent variable or the outcome while generations, gender, marital status, education level, income, household type and ethnicity has been taken as the independent variables or the predictor variables. The independent variables have been added to the model one by one as to derive the best model and to determine the impact. The below given table represent the results of the fitted model determining the impact of the demographic and socio-economic factors on online consumption where only the variables which are significant in determining online consumption has been presented.

| The variables determining online consumption | Probability Value (P-Value) | Reference category | Coefficient value | Odds ratio |
|--|--------------------------------|---------------------------|-------------------|------------|
| Generations | .000 | Baby boomers | | |
| Millennials | .000 | | 1.893 | 6.639 |
| Generation Z | .000 | | 2.484 | 11.993 |
| Gender | .001 | Female | 0.869 | 2.384 |
| Level of education | .033 | Above secondary education | -1.748 | 0.174 |
| Employment status | .000 | Unemployed | 1.135 | 3.111 |
| Marital status | .002 | Married | 1.380 | 3.976 |
| Household type | .039 | Extended | 0.609 | 1.839 |

Table 4.1 The impact of the demographic and socio-economic variables towards online consumer behaviour.

Source: sample survey, 2020 N:600

First the statistical significance between the independent variables and the dependent variable has been identified as to determine whether there's a significant association between the outcome and each term in the model. Therefore, under the confidence interval of 95% the statistical significance of each variable has been taken in to consideration where variables such as generations, gender, marital status, employment status, level of education and household type has been found statistically significant concluding that changes in these variables actually impact on the population being online consumers while variables such as generation X, income, sector and ethnicity being statistically insignificant concluding that there's no impact on being online consumers due to the changes in those variables. Generation X was found having no impact compared to the reference category as both generation X and baby boomers being the least online consumers among the four generations. The level of income was also identified to be insignificant as non-income earners reporting to be among the highest online consumer categories, this could be identified as a result of generations Z being online consumers even though they are still dependents. Almost every ethnicity being online consumers without much difference could also be identified as a reason for it to be insignificant and not having an impact.

As shown in the above table the odds ratios compare the odds of the event occurring at two or more levels of the predictor. The odds ratios that are greater than 1 indicate that the event is more likely to occur while ratios that are less than one indicates the event is less likely to occur. Likewise, the coefficient determines the likelihood of the event to occur as per the changes in the predictors. Thus, the positive coefficients indicate the likeliness of the event to occur while the negative values indicate the opposite of it.

As per the results driven from the model the odds of Millennials purchasing online goods and services are 6.6 times higher than the Baby boomers while it is 11.9 times higher than baby boomers when considering Generation Z. This trend could be identified by the coefficient values as well. This concludes the probability of younger generations being the online consumers than the older generations. When considering gender, the odds of males purchasing online is 2.4 times higher than the females. The odds of purchasing online are 0.17 times higher when a person is having above secondary level education rather than a person who has below secondary level education. At the same time the odds of purchasing online are

3.1 times higher when a person is employed than being unemployed. The odds of purchasing online are 3.97 times higher when a person is single rather than being married. Also, the odds of purchasing online are 1.8 times higher when the households are nuclear families than being extended families.

Therefore, the model and its results prove that there's a significant impact from most of the demographic and socio-economic characteristics of a population in determining the online consumer behaviour. though this was done in the pandemic period this could identified in the general scenarios as well. According to the findings of Daraz.lk the highest online consumers during 2019 could be identified between the ages of 18 – 24 years (Daraz.lk,2019) and according to Wijesundara's findings Sri Lankan men are more attracted towards online purchases than females, at the same time Wijesundara identifies the online shoppers within Sri Lanka to be well educated at least up to the level of Advanced level (Wijesundara, 2008). Likewise, the findings of this study could be applied to a general scenario even without the pandemic situation. According to Naseri and Elliot findings, having a stable income, being married and having extended families positively impact the online consumer behaviour due to reasons such as being able to take financial risks, having two incomes after being married and having more members while living in an extended family (Naseri and Elliot, 2011). But according to Richa the level of income is not a problem in purchasing online (Richa, 2012). And according Thomas, being single rather married positively affects being online consumers because of the least number of responsibilities they have (Thomas, 2018). Likewise, the findings of this study tallies with some of the literature. Therefore, this emphasizes the differentials that could occur within the geographical boundaries we consider while bringing the importance of identifying the demographic and socio-economic impact towards online consumer behaviour as it helps in segmenting the consumers accordingly to earn more profits.

The results were driven based on the sample selected from the Western province of Sri Lanka, which holds the highest online order share and the highest computer literacy levels in the country. Therefore, one may identify different trends and patterns in purchasing online in another geographical area according to their demographic and socio-economic backgrounds. Hence, identification of demographic and socio-economic characteristics of the consumers is important as it will help the store owners in identifying what products need to be focused the most. As an example, the results driven from the study shows males to be online consumers compared to the female counterparts, the store owners can identify what products are sold the most among the males as to increase the availability of the products to increase the sales. Also, if one does identify how the demographic and socio-economic characters impact the product wise purchases the store owners can definitely increase their revenues. As example even though this shows income to be insignificant and not to have an impact towards being online consumers, if product wise purchases were identified income could be identified as a significant factor which impacts the online purchasing behaviours (Eg: purchase of electronic items). Also, identification of the demographics of an area is much important as it shows the composition of the areas which allows the store owners in identifying the need. As an example, if an area has more aged people the need of medical services is higher compared to the other areas. This allows the marketers in identifying new areas in expanding their business. Also, though online purchases of older generations are visibly lower compared to the younger generations their online purchases in medical products are proven to be higher in the general context. Therefore, identification of the demographic and socio-economic characteristics of the consumers of an area give rise to several business opportunities while boosting the profits and the survival of the online stores of an area in the long run.

Except for identifying the demographic and socio-economic impact a question was asked from the respondents as to know whether their desire in purchasing online goods and services will continue in the future as well. The Millennials and Next Gen's (Generation Z) was 100% positive towards purchasing online goods and services in the future while generation X and Baby Boomers being 72% and 53% positive towards purchasing online goods and services. Moreover 84% of the online non-consumers during the study were found to be interested in purchasing online goods and services in the future. Therefore, identification of the demographic and socio-economic factors towards online consumer behaviour paves the way to understand the ways in segmenting the customers, targeting the customers, to earn profits and to determine the future of the online market. While understanding the online consumer behaviours during the pandemic the study has identified the emerging future of the online market in Sri Lanka. Therefore, if one determines in starting an online business in Sri Lanka even after the pandemic that could be considered a good idea as the future of the online market was clearly visible with the younger generations. Nevertheless, the pandemic situation has positively impacted the online markets but the positive impact could have been doubled if the online markets had identified the demographic and socio-economic impact towards online consumer behaviour. Therefore, the study emphasizes the importance in identifying the demographic and socio-economic factors towards on online consumer behaviour proving the theory of Reasoned Action which states the demographic profile of a consumer to be a key factor in determining online consumer behaviour (Ajzen et.al, 2005).

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Politics 2.0: The Pandemic Redefining the Norms of Governance in India

Raj Deep1

Abstract

Covid19 has transformed the temporal and spatial dimensions of the world and has redefined the norms of living. Politics and governance across the world have become the cornerstone for either appreciation or criticism for handling the pandemic. The objective of the research paper is to capture the metamorphosis which the political space and governance has witnessed owing to the pandemic and it's long term societal impact especially in context of India. Long term social impacts could be gauged in terms of shrinking of democratic space with the encroachment on the federal structure by unilaterally taking the shutdown decision.

The study will make use of both the primary sources .i.e. the governmental data and reports like Global State of Democracy 2021 report and the secondary sources like newspapers, journals and internet sources. The paper also makes a literature review relevant to the study like Giorgio Agamben's theory of the state of exception, which he claimed has become a dominant paradigm during contemporary politics. Secondly, Doug Rutzen and Nikhil Dutta in their research paper, Pandemics and Human Rights, Just Security, argued that the obvious pandemic response by most of the countries had been imposing severe restrictions on core civic freedoms and had very aptly warned on that the pandemics are fertile breeding grounds for government overreach. Thirdly, Mihir R. Bhatt's, Impact of Covid-19 on Humanitarian Crisis in India, highlighted that the lockdown was considered as a top down exercise where the Disaster Management Act 2005 was used by the executive to impose lockdown in the entire country.

The research paper highlights how the pandemic provided an opportunity to the Union government for greater appropriation of power at the expense of the states especially during the first wave and led to mollification of certain issues and even led to rise of new conflicts revolving around Covid-19 and electoral politics. Another important issue which has been put forth in this paper is that if state of exception would become the new normal how it could reshape and remould the party system and electoral system in the long run. In the wake of Omicron threat, the consequences of Election Commission's guidelines banning physical rallies and using virtual space have been analysed and found that the entire culture of electioneering and electoral politics would witness tremendous transformation.

The research paper concludes by highlighting how the pandemic has brought a kind of paradigm shift in the structural and functional dimensions of political space and has greatly redefined the norms of governance in India. The paper also emphasized on a more decentralized and responsive mechanism to handle this type of crisis in the future with different tiers of government working in tandem with each other giving way for a more cooperative federalism.

Key Words: Covid-19, Governance, Democracy, Federalism and Constitution

Covid-19-a term or rather we can say a phenomenon has transformed the temporal and spatial dynamics of the contemporary world and has even redefined the norms of living for

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generations to come. Moreover, the virus has opened the fragility of human life and exposed how vulnerable and helpless humans could be. There emerged a kind of existential crisis for the entire human kind. The effect of Covid-19 has been overarching and not limited to the health and medical field only. It has engulfed within its ambit all the possible dimensions of human life be it social, political, economical, psychological etc.

The pivotal theme of this research paper is to capture the metamorphosis which the political space and governance has witnessed owing to the pandemic and it's long term social impact. The Covid-19 has greatly redefined the political landscape and pushed the political agencies and structures to reconfigure and remodel themselves in the light of the crisis. Countries across the globe have either been appreciated or criticized for the way they handle the pandemic. In the last two years the Covid-19 pandemic has become the testing ground for different forms of government be it democracy and authoritarianism; unitary and federal or any model in between. Governance became the moot point for discussion.

According to the Global State of Democracy Report 2021, more countries than ever including the established democracies are suffering from democratic erosion and democratic decline in terms of quality. A negative trend has been that democratically elected governments are using authoritarian tactics and the pandemic has made it easier to justify their behaviour like politicization of judiciaries, civil and minority rights restrictions, media manipulation and weakening of the civil society (IDEA, The Global Sate of Democracy Report-2021).

The risk of democratic decline got further aggravated due to the epidemic as the world was even earlier witnessing the trend marked by the closing or shrinking of the civil space. A general trend observed by the politicians, right activists since 2000 have been a kind of increased government restrictions targeting civil society organizations CSOs and limiting their space, autonomy or capacity (Carother and Brechenmacher 2014).

The Indian situation was no less an exception and moreover being a developing country with 1.3 billion people, the fear psychosis towards the crisis was much more intense and alarming. The Indian Constitution had never envisioned managing a cataclysmic global pandemic, like the Covid-19. No appropriate framework for tackling the Covid-19 crisis has been provided in the Part XVIII of our Constitution (emergency provisions). However giving the logic of national importance, the Union government took charge of the entire governance structure both at the central and regional level. The MHA lockdown guidelines tried to get hold of every minute aspect of regional governance like limit of twenty persons for the congregation for funerals, prohibition on gatherings for sports and entertainment purposes, without any exception. These all were done justifying the logic of national importance (Khamroi 2020).

Literature Review

Making a literature review of The state of Exception by Giorgio Agamben brings to the forefront various issues which seemed to correlate with the way the pandemic was handled by various governments across the globe. The Theory of the State of Exception could be traced back to the French Revolution (Agamben 2005). It was defined as a special condition where the juridical order got actually suspended owing to an emergency or crisis situation threatening the state. In such kind of emergency situation the sovereign i.e. the executive power prevails over the others with the basic laws and norms being violated or modified by the state. Agamben proposed a general theory of the state of exception which he claimed had acquired a dominant

paradigm of government in the contemporary politics (Agamben 2005). For Agamben such suspension of law is central and over bearing in the sense that it directly affect the lives of the individual not as the subject of the state but as human being as such. The most fundamental aspect around which Agamben's theory was premised was the indistinction in the realm of politics i.e. between the external and the internal, between the private life which he termed as *zoe* and the public sphere which characterized life as *bios* (Agamben 1998). Agamben argued that the distinction holds no relevance as in order to legitimize the ever growing dominance on the lives of the citizens, the sovereign employed ever tactics to blur the lines. He termed the indistinct form of human being which got created in the process as *homo sacer* (Agamben 1998). He further added that the homo sacer is reduced to as bare life where he is not only bereft of being a citizen of the state, but even his very existence of being right to live and act upon his natural life is dictated by the terms of sovereign (Agamben 1998).

Another scholar, Vaughan-Williams in *Borders, Territory, Law* has rightly emphasized that the very concept of bare life does not only lie in the reduction of political to natural life i.e. of bios to zoe, but in the indistinction between the two "bare life is a form of life that is amenable to the sway of the sovereign power because it is banned from the realm of law and politics [...] whenever and wherever the law is suspended" (Vaughan-Williams 2008). Agamben considered the state of exception as coterminous with the law as it defines the borders of normative order with the same analogy that the zoe can never be completely separated from the bios (Agamben 2005).

Doug Rutzen and Nikhil Dutta in their research paper, *Pandemics and Human rights, Just security* highlighted how the obvious pandemic response by most of the countries had been imposing severe restrictions on core civic freedoms and had very pertinently warned on that the pandemics are fertile breeding grounds for government overreach (Rutzen and Dutta 2020).

Mihir R. Bhatt in the article, *Impact of Covid-19 on Humanitarian Crisis in India*, very aptly tried to bring out the result of top down shutdown exercise of the government and the humanitarian crisis that followed. With the increase in Covid-19 cases across the world, the Prime Minister of India announced a three-week lockdown on 24th March 2020 to curb the menace of virus. The lockdown was further extended till the first week of June 2020. One of the distinctive features of this lockdown was that it was considered as a top down exercise where the Disaster Management Act 2005 was used by the executive to impose lockdown in the entire country. Legal validity for using this act is still debatable and open to scrutiny. No stakeholders were consulted before taking this step which led to a kind of humanitarian crisis like mass migration, loss of income and shrinking of democratic space and economic markets. Like the lockdown process, unlocking was also perceived as a kind of dictate by the union executive in the light of economic standstill. It was really ironical that the unlocking process met with the highest increase in the daily Covid-19 cases in India (Bhatt 2020).

Government Response towards the pandemic: An Analysis

International IDEA's Global Monitor of Covid-19's impact on Democracy and Human Rights highlighted that 90 countries have passed laws which tried to curb the freedom of expression during the pandemic, often justifying their actions on the ground of combating disinformation about the virus, which itself was defined as 'infodemic' by the World Health Organization (IDEA, The Global State of Democracy Report-2021).

As the crisis unfolded and started expanding its tentacle, the prime question in India was what should be the route chart or plan to control this. Both the centre and the states were in a dilemma as to which provision of the Constitution should be used to handle and contain this crisis. Going by the federal provisions, the Seventh schedule of the Constitution which dealt with the distribution of power among different constitutional units, has given primacy to the States vis-a-vis Centre on the issue of health. The schematic division of various provisions under the Union, State and residuary lists are as follows- the Centre has been entrusted with the legislative power for inter-state migration and inter-state quarantine provisions via entry 81 of the Union list. Accordingly States via entries 1, 2 and 6 of the state list have been entrusted with legislative field of public order, police and most importantly public health and sanitation including hospitals and dispensaries. And finally both the centre and the states used residuary powers via entries 23 and 29 of the concurrent list for maintaining the areas of social security and social insurance, employment and unemployment and prevention of the extension from one state to another of infectious or contagious diseases or pests affecting humans, animals and plants (Agarwal 2020). Article 73 and 162 of the Constitution further envisages that the executive power of the Union and the States are coextensive with the legislative power (The Constitution of India). Thus the Constitution has very clearly defined that the primary role of the management of health care rests with the states with the centre playing an overarching leadership and role of coordinating with different federal units providing financial and other critical assistance to the states.

In absence of the word disaster in the Seventh Schedule of the Constitution, the Union deploy the residuary powers to invoke the law and thereby issuing various directives to the states with the situation becoming more aggravating. The states invoked the Epidemic Diseases Act, 1897 to deal with the epidemic like situation (Epidemic Diseases Act, 1897). Many states used the provision to issue State Epidemic Diseases Covid-19, 2020 regulations to make necessary regulatory provisions for handling the pandemic (Nolan 2020; Government of Meghalaya 2020; Government of Jharkhand 2020).

The Centre used the other provisions of the DM act thereby issuing necessary guidelines and instructions to the States regarding matters like length of the lockdown, restrictions and containment zones (Ministry of Home Affairs 2020a, Government of India). A critical analysis revealed that the pandemic brought the full power of the centre in display like imposing the lockdown, monitoring state responses including physical distancing norms, regulating economic provisions and even grant of financial packages (Barman 2020). During the lockdown period the centre usurped key state powers like banning of liquor sale or stoppage/resumption of transportation (Lockdown 4.0: Kejriwal wants Modi to allow public transport, pvt offices, Business Standard 2020). This issue become more contentious when the MHA forced the Kerala government to roll back its decision of opening the restaurants based on local assessment and was cited as a peak of centralized federalism (Sahoo 2020). Section 11 of the DM Act, 2005 provisioned for a national plan for containing the pandemic by taking states and other stakeholders into confidence, which was however found lacking rather absent (Agrawal 2020).

In an another report which traces the development in democratically backsliding democracies in 2020 and 2021, India was found to be one of the backsliding countries with most democratic violations during the pandemic which includes excessive use of force for implementing the Covid-19 regulations, harassment and prosecution of human right activists and others critical of government policies. India topped the list of countries which used internet shutdowns as a tactic during election periods (IDEA, The Global Sate of Democracy Report-2021).

Long term Social Impact

One of the most debated and discussed topic during the pandemic especially in the Indian context has been the issue of federalism. The kind of diffused and decentralized pathway followed by the federal structure raises question on its suitability vis-à-vis handling crisis situation like Covid-19 which required a more swift and centralized approach. This issue got amplified when USA a federal country with the most advanced health care system started lacking in managing the situation thereby exposing the vulnerabilities of its capacities. This led to the political analyst in the US demanding the government to abandon the rigid and dual federal system where health has been the exclusive domain of the states and the local governments (Selin 2020). In the case of India, the diffused federal approach became a moot point for comparison with the centralized and authoritarian system of China. The need for a unified hierarchy for an established response to the crisis has fuelled the need for such comparison (Hattke and Martin 2020). One of the most important questions was the kind of response in handling the pandemic from such a large federal country with horizontal structures being dependent on multitude of actors and multiple authorities having overlapping jurisdictions. Long term social impact could be gauged in terms of shrinking of democratic space with the encroachment on the federal structure by unilaterally taking the shutdown decision.

Irrespective of the theoretical context, there has been unanimous clarity among the social contractualists that the emergence of state is based on the consent of the citizen to delegate their power to be governed. In exchange the citizen's claim various entitlements against the state considered to be essential like preserving life, safeguarding property and access to minimal welfare goods. However the pandemic has led to a kind of colossal entitlement failure, with the chances of State completely appropriating the power and turning into a Leviathan in the long run.

There are probable chances of the structure–agency debate taking a completely new facet as one of the long term effects of covid-19. If usurping of power acquiring a centralist tendency becomes an excuse for handling any crisis, then there are maximum chances of developing a kind of structure which would be all encompassing and controlling the minute dynamics of agencies. The state of exception would become the new normal.

Another probable long term impact of Covid-19 could be gauged in terms of serious implications for the party system and electoral system. One of the major dilemmas of the political parties and the party system is their subjection to the two distinct and somewhat opposing demands of either being representative or effective. Representation considers whether the elections could provide the opportunity to diverse groups with different preferences to access the political space by enabling them and making the outcome more varied whereas effectiveness is concerned with the facilitation of governance and stability by aggregating the societal preferences leading to concentration of power. As both the demands are in contradiction with each other a kind of zero-sum game develops between the two i.e., the restriction of political space by limiting the number of contenders for effective governance leads to undermining the demand for representation and vice versa (Beilasiak 2006). Effectiveness contributed to the decline of political competitors thereby considerably reducing the over emphasis on representation. If the state of exception would become the new normal, then probably a long term effect could be change in the nature of party system i.e. becoming more and more one dimensional in order to boost the effectiveness demand relegating backstage the demand

for representation. Further there are equal chances of the parties manipulating the electoral system in a more unilateral fashion so as to suit their nefarious design.

A very subtle though a long term probable impact which have started surfacing is regarding the authenticity of the existing Constitution and making demand for a new one. Surprisingly this demand came from none other than one of the incumbent Chief Minister of a province. This demand was made owing to the ambiguous provisions regarding the division of power between the Union and the States and the former Centralist approach on many of the occasions (KCR need a new Constitution, Times of India 2022).

Mileage for Political Elites

In terms of gains by the political elites there are evidences which suggested that promising free vaccines during election campaign in one of the provincial legislative elections in 2020 .i.e. of Bihar gave an electoral edge to the party. This could be testified by the electoral results as the BJP emerged as the larger party in the winning coalition for the first time (Bihar Legislative Election, 2020). Though the BJP was not able to harness the benefit of long protracted election in West Bengal, but still managed to increase it's numerical tally to a considerable extent. The borrowing limits of the states were increased from 3 percent to 5 percent by the Union government but only on the terms and conditions fixed by the later (Purushothaman & Moolakkattu 2021).

In the upcoming legislative elections of five provinces due in Feb-March 2022, the Election Commission of India has made announcement for having no physical rallies going for the polls owing to the Omicron threat. This announcement paved ways which are going to be more digital and virtual. It will have a long term impact as the entire culture of electioneering and electoral politics will witness tremendous transformation. Cadre, digital power and connectivity would be three mantras deciding the fate of election. The political parties having enhanced digital strength in terms of IT infrastructure, trained cadres for organising virtual campaigns would be in a better position. The BJP has a formidable network in WhatsApp and Telegram and other social media groups like Facebook and Tube. Other parties have to catch up with the kind of digital edge which the BJP has (Narayan, The Print 2022).

BJP chief spokesperson and Rajya Sabha MP Anil Baluni said that his party had been preparing for digital and virtual campaigns for the past two years since the Covid-19 outbreak. Going by the scale and speed of the spread of pandemic, any possible relief seems to be a distant reality and there are high chances of the five states going into the polls without any physical rallies thereby creating a history (Singh et. al, Times of India 2022).

Conclusion

To conclude we can say that the pandemic has greatly redefined the norms of governance in India. It has brought a kind of paradigm shift by altering the thought process. The pandemic provided an opportunity to the Union government for greater usurpation of power at the expense of the states especially during the first wave and led to mollification of certain issues giving rise to new conflicts spinning around Covid-19 and electoral politics. Institutions and ideologies are reshaped and remoulded in the name of managing the pandemic. It should be noted that the Union's response towards the first wave could be phrased as unilateral centralization. However Centre's cloistered approach during the second wave in terms of

leaving the states with respect to lockdown and vaccine policy could be better defined as unilateral decentralization. If the State of Exception would become the new normal then it would have crushing effect on the political dynamics of the country. This could be really dangerous not only for the federal structure of the country but even for the entire democratic set up. Another important point which needs special mention here is that the pandemic has made the class divide starker and hence governmental efforts and relief packages worth crore of rupees and schemes like Atma Nirbhar Bharat should be analysed on the parameter of Rawlsian notion of justice i.e., benefit of the least advantaged instead of looking from the utilitarian perspective i.e., the greatest benefit of the greatest number. Hence these conceptions of justice, liberty, equality and various other social science perspectives should be indeed a helping hand for the government in the future to tackle this kind of crisis situation so that there would be no crisis of governability. The study suggested that there is a need for more decentralized and responsive mechanism to handle this type of crisis in the future with different tiers of government working in tandem with each other giving way for a more cooperative federalism. Also, there should be praxis in the government's maxim for, "Minimum Government-Maximum Governance".

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Long-Term Impact of Covid-19 on Culture and Social Behaviours: The Canadian Experience

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This paper attempts to examine the long-term consequences of Covid-19 on culture and social behaviour of people living in Canada.

Canada is a country of thirty-eight million people representing eighty-seven ethnic origins. They live in ten provinces and three territories which are governed by autonomous provincial authorities. The culture is examined in terms of beliefs and values while behaviour is assessed in relation to corresponding actions of people.

During the past 24 months, the Canadians experienced all variants of Covid-19 with 3.2 million people being affected and 35,923 deaths (Statistics Canada: 2021). The Canadian health authorities imposed strict health measures to manage the spread of Covid-19 and people's reactions have taken a variety of forms ranging from faithful adoption of such measures to street demonstrations against mandatory vaccinations.

For analytical purposes, I shall divide the multicultural Canadian population into two categories. The first being the "Old Timers" encompassing the Aboriginal Canadians, the British, The French, the Italians, the Ukrainians, the Greek, the Americans, and a few other immigrant groups. The Canadian culture today is a combination of all these cultures with a forceful influences and inputs from the British. The British ways of doing things are still valued by many as the model behaviour. The second group includes recent immigrants from non-traditional source countries such as Asia, Middle East, and Africa. Most of them still maintain their original cultures while trying hard to adopt some western way of living (Hansen: 1938). The Covid-19 had a differential impact on these two categories. The long-term impact of Covid-19 on these two categories of people depends heavily on their current positions and reactions.

This paper is built on data and facts coming from published material, news media discussions, reviews, and personal interviews of 10 Covid-19 victims in Ontario. It is assumed that the past behaviour is a valid reflection of future performances.

The paper is divided into three parts. First part will be a discussion of Covid-19 developments in Canada during the past 24 months. Second part will cover some selected indicators of restrictions (such as social distancing, confinement to apartments and senior homes, working from home, unemployment, welfare packages in lieu of wages, mental health, and restrictions on schooling) imposed on people's values and behaviours and people's reactions to them. These reactions will shed light on long-term consequences of people's values and behaviours. This paper is a preliminary analysis of data/information of an on-going research project. The final part is my conclusion about long-term consequences of Covid-19 on people's values and behaviours.

PART I

The very first case of Covid-19 was reported in November 2019 in Canada, and it got spread across the nation within about three months. By April 2020, it reached a higher level of spread

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and the health authorities, both federal and provincial, began to impose restrictions on schools, workers outside homes, seniors' homes, and businesses. Small businesses were practically closed, and big businesses adopted a shift-work system. Several lock downs were imposed, and air travel was restricted for outgoing Canadians and incoming visitors. The Canadian-American border was opened only for essential travelling.

Current variants of concern in Canada include Alpha (B.1.1.7), Beta (B.1.351), Gamma (P.1), Delta (B.1.617.2), Omicron (B.1.1.529).

By February 18th, 2022, the total number of cases reported was 3,227,289 with 3,062,671 resolved cases. The total number of reported deaths is 35,923. All provincial health authorities are required to report their data to the Public Health Agency of Canada (PHAC) every week. The nature of spread of Covid-19 presents some valuable information for future planning. any exposure that occurred in Canada: 1,538,397 (75.8%), including contact with a known COVID case: 823,550 (40.6%), contact with a traveller: 9,974 (0.5%), an unknown source: 704,873 (34.7%) and travelled outside of Canada: 16,826 (0.8%) (PHAC reports: 2022). the Canadian health authorities consider Canada as a "High Risk" area. (PHAC reports: 2022)

PART II

The data and information stated above will justify why Canada had to have several restrictions to contain the spread of Covid-19. Let us examine these restrictions and how people reacted to them.

Social Distancing and Isolation

The mandatory requirement for social distancing (SD)was two metres in public places. The SD was not a serious matter for the "old timers" as they have been used to such behaviours for many years. They will hug people only if hey know them very well personally. However, a vast majority of old timers are accustomed to go to bars or to public restaurants during weekends. Some of them are in the habit of opening their doors to friends for dining on Friday evenings or Saturdays. As case # 1 reported:

We have lost our friendly crowd now because we cannot invite them home. No one invites others these days. We feel that we are completely isolated from the rest of the world. Even going out to restaurants is a risky venture as we have no idea how hygienic the food preparations are. We wonder whether this will be our new lifestyle now onwards.

Three respondents have stated that they were not so much of social beings but now they feel isolated and lonely. Social distancing has affected the new immigrants from collective cultures in an unprecedented way. As case 2 reported:

Our family comes from South Asia and every week end we have a lot of people in our house. We cook, eat and play music. Our children also play with other children. This is a regular thing. We share food from other families. Now everything has stopped. We secretly organized a party, and the police came to stop it. Our personal freedom is fully gone. We like the freedom we have here in Canada, but these restrictions are too much. We believe in getting together among us and it is a strong value we subscribe to.

Many members of the second category had violated the health restrictions whenever possible and the higher rate of Covid-19 spread among them reflect this pattern of behaviour. Several young boys were found playing cricket on public grounds and they were charged \$800 per person at one time. Several big wedding parties were invaded by the police. However, with the increasing rate of Covid-19 these people were forced to give up those old habits and to experiment with new isolated lifestyles.

Going forward, many people have expressed their fear of life and death and at the same time, concerns about a new lifestyle radically different from what they have been used to. This is where the Covid-19 has created massive mental health problems for all Canadians.

Apartment Life and Seniors' Homes

About 30% of people in areas like Greater Toronto lived in apartments. Those apartments became a ready target for Covid-19. Besides, people in those apartments were not allowed to go out by health restrictions. Living 24/7 was not an easy thing for these people who engaged in private small business, cab driving, office work and factories etc. A heavy toll of Covid-19 was reported in these apartments. The apartment dwellers fall under low-income category. Over crowding and low income jointly had an unmeasurable effect on them showing how Covid-19 affected social classes differently. Most of the early deaths were reported among members of this social class and seniors over 65 years of age.

What we see gradually is that people have begun to move away from apartments and find accommodation in far away places from where they will be able to commute to work.

Seniors' homes are a different story. Over 100 seniors' homes are located within the province of Ontario and many more in other provinces. Many families of the Old Timers' group had their parents living in seniors' homes. Covid-19 directly affected the inmates who were over 65 years of age. Over 80% of the deaths were reported in these homes initially. Regular visitors from their families were stopped and that created a considerable amount of stress among the inmates. Staff attending to these seniors became victims of Covid-19 and the management faced a very difficult task of looking after their inmates. People's reaction to this issue took many different forms. Some children took their parents back to their homes. This was seen among the members of the new immigrant groups. The members of the first category had very few options available to them. That was the beginning of mental agonies of these children who are grown up adults.

What appears to be happening today is that the government is imposing strict health regulations on the way seniors' homes are managed. This is to avoid any future pandemic disasters. Filling vacancies in homes has become a serious employment issue today. Especially those who got Covid had refused to go back to work due to their fear of death. The value and behaviour of caring for the elders among the old timers has been challenged and they are contemplating on new forms of elder care in Canada now.

Working from home and Unemployment

Over 200,000 Canadians had to give up their jobs and many of them were temporary workers. Permanent workers received benefit for working from home. Some even received technical support from the employers. Public servants, bankers, some private sector employees, and

digital media related workers fall under this group. Initially most of them felt it as a blessing because it saved their time and daily cost of travelling to work. However, when all family members including children are present, 24/7, under the same roof, several interaction patterns have begun to appear. Many Canadians are not used to living with all family members 24/7 and hence, new behaviour threatened their individual freedom and ability to interact with fellow workers in workplaces. A considerable amount of spousal abuse including verbal and physical assaults, getting into regular and increased alcohol consumption, fighting with children and unrest within the house are reported. Some couples have reported these incidents to the police too.

This new lifestyle may take longer time to find a suitable replacement. Although a family is defined as a unit of love and empathy, these values have been shattered during Covid-19 pandemic period. Some couples have sought family counselling services to settle their problems within the family. However, this is going to be a long-term impact on families.

Social Welfare Systems

Canada has an exemplary social welfare system which covers people of all walks of life. The system provides pensions, employment insurance when one loses his/her job, disability pensions, old-age security, public assistance, and life insurance. The national health card allows Canadians to seek medical services from doctors and hospitals. Even open-heart surgeries are covered free of charge. Income tax paid by every working Canadian supports these services. During the pandemic, all these services were strengthened. In addition to this the federal government introduced a financial package titled recovery benefits for those who could not go to work due to Covid-19 related reasons and lack of access to pensions or employment insurance.

By January 2022, 29,855,270 applications were received and \$29.39 billion were allocated to support this funding. Each person was granted a taxable income of \$2000 per month for about one year. This helped those who lost their jobs and were not able to work outside homes. As of February 2022, this package is stopped. A few other financial benefit packages have been introduced to support small businesses. These financial packages have helped a considerable number of low-income families, especially who did not have permanent employment opportunities.

Going forward, many of these recipients have hoped for a continuation of these benefits for another year. In the future, they are confident that the government will come to their rescue in emergencies like this. Although there is a strong tax base in Canada, these new payments to people increased the budget deficit dramatically during 2021-22. Culturally, many recipients of the new immigrants group welcome this "dole" but the olde timers tended to refuse the payments after a few months.

The government was forced to recruit new workers to handle these applications partly because the existing staff were affected by Covid-19 badly. It may not be possible for the government to continue these packages at the same magnitude even if the Covid-19 continues to spread into smaller provinces. The Covid-19 has created a market for support workers who will be required to fill existing vacancies in care homes. The government will be looking at possibilities of recruiting foreign workers.

Children and Schooling

The worst impact of Covid-19 could be seen in the school system which was closed or partially open with digital learning opportunities. Children of all ages lost opportunities for socializing with friends, engaging in outdoor sports and recreational activities. Even the digital learning from home has not gone well with expected outcomes. Staying home 24/7 with parents appeared to be an unbearable pressure for school going children. According to psychologists, children had developed anxiety and depressive disorders during the past 24 months. "there was a surprising amount of resilience during the first few months of the virus' outbreak, particularly when many countries went into unprecedented lockdowns. Over time, however, the loss of daily social contact started to take its toll". (Ellyat H. 2022).

It is predicted that no one or no system will be able to compensate for the two years that the children lost in their social development. Even with the reopening of schools, some restrictions are needed to be in place to prevent any new outbreaks. I would say that the school going children became the second group of indirect victims of the Covid-19.

Conclusion:

According to the Chief Public Health Officer of Canada, Canada has passed the peak of Covid-19 and is ready to move out of crisis response. (Toronto Star: February 19.) She further asserted that while a resurgence of cases is not unexpected given the characteristics of the Omicron variant, the good news is that current levels of immunity in the Canadian population are expected to reduce the impact.

The public still has many reservations and fears about life and death with no absolute knowledge of the danger. People have expressed a need to wear masks for the next few years and to avoid intermingling with large crowds. The number of Canadians who refuse to take vaccinations is on the increase on the grounds that the vaccines are not effective enough. A vast majority of those who got Covid-19 during the past 3-4 months were non-vaccinated adults.

It is highly likely that public servants, bankers, an many other workers with permanent jobs will continue to relocate to remote areas after selling their homes in the Greater Toronto Area (GTA) for an attractive price. The housing prices in the GTA have reached about 1 million during the past 24 months.

It is obvious that the social class has played a critical role in the spread of Covid-19 in the Canadian society.

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'Redefined Life and New Insight': COVID-19 and its Impact on Human Behaviour

Narendra K Singh¹

During the last two years, people have experienced unpredictable conditions caused by COVID-19, a global pandemic. Unlike other medical diseases, this disease has created a long-lasting impact on human behaviour. This is because it changed the way of interaction among people. For precautionary measures, strict restrictions were placed on people's interactions. COVID-19 is an infectious disease spread through contact with an infected person. Various restrictions such as maintaining social distancing, wearing face masks and quarantine (social isolation); bough significant change into human behaviour. People have experienced 'new things' which they never imagined. This article will explore such 'new things' which are consciously experienced by individuals, and they have developed new insights into their life. These 'unprecedented experiences' have long-lasting impacts on their behaviour. This study used face-to-face interviews for collecting their experiences lived during the COVID-19 pandemic and reflection of such experiences into their life. This study included 32 in-depth interviews. The study used a phenomenological research design for gathering individuals' experiences about the COVID-19 pandemic, that they lived or still living. The study revealed that the COVID-19 pandemic has an impact on human behaviour. People started to redefine various aspects of their life and adjusted to this new normal. This study identified various themes and sub-themes associated with the COVID-19 pandemic.

Keywords: *COVID-19*, *Human Interaction*, *Social Distancing*, *Experiences*.

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Assessment of Flood Risk Management During COVID-19: A case study in Kelaniya DS Division

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The Covid-19 pandemic is increasing the risk of flooding in densely populated areas. The Kelaniya District Secretariat (DS) is one of these located downstream of the Kalani River, which often floods each year. This study aims to identify problems in local municipalities and solutions to overcome these problems through flood risk management during the Covid-19 pandemic. Drivers, pressures, and status of disaster preparedness are determined through semi-structured interviews conducted with government officers in Kelaniya DS, District Disaster Management Center, and the National Operation Centre for Prevention of Covid-19 Outbreak (NOCPCO). The impact of current policies is determined by a review of the literature and reports. Responses are suggested and verified through focus group discussions with government officials. Previously used evacuation centers do not have enough space to keep social distance. Thus, tensions arise between victims and officials with the introduction of health guidelines in evacuation centers. Volunteer groups are set up at the village level to manage both disaster risks. Evacuation drills are rarely organized, so public information is limited to deal with other people and officials. Increasement of hazard and vulnerability due to different variants of Covid-19, high rainfall due to monsoon climate change, economic crisis, and lack of evacuation drills. Vaccination, early warning, and raising public awareness can reduce the risk. Role of different state and non-state agencies in dealing with people evacuated due to floods, long-term political impact of the pandemic for governance issues, community participation in public health and role of state, civil society, private sector, are further discussed in this paper. This research identify the status of managing risk from multiple hazards to improve collaboration between disaster management and health authorities.

Keywords: Flood, Covid-19, Kaleniya, Risk Management

1. Introduction

When considering the disasters in the Sri Lankan context, most of the disasters are water-related. Floods, droughts, landslides, and tsunamis are some of the badly affected disasters in Sri Lanka in the past few years. From these hazards, flooding is the greatest threat to the people (M. De Silva and Kawasaki 2018; Thileepan and Sivakumar 2018). Although there are early warning systems and response capacity, the number of deaths due to flash flooding has been increased during the past decade (Chandrasekara et al. 2018). Today, the covid-19 outbreak justifies the necessity of preparing and paying attention to risks that magnify with the pandemics (Amaratunga et al. 2020). Impacts of Covid-19 get worse with the overlap of any natural disaster, especially by a water-related disaster.

Risk is a function of hazard, vulnerability and deficiencies in preparedness (Birkmann 2007). Flood hazard is increasing in Sri Lanka as a result of climate change (Wagenaar et al. 2019). There are some deficiencies in the implementation of policies in disaster management such as weakness of community preparedness, deficiency of coordination between stakeholders, poor response, overlapping responsibilities of organizations and early warning system (Siriwardana, Jayasiri, and Hettiarachchi 2018; Palliyaguru, Amaratunga, and Baldry 2014; Birkmann 2007). It is important to discuss deficiencies in preparedness to the enhancement of resilience by considering a flood disaster during the Covid-19 pandemic in Sri Lanka.

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This study is aimed to assess flood risk management in a pandemic by considering a case study in the Kelaniya division in Sri Lanka. DPSIR (Drivers-Pressures-Status-Impacts-Responses) framework (Tscherning et al. 2012) is used to present the results of this paper.

2. Methodology

2.1 Case study

Kelaniya area gets inundated by floods of Kalani river. Kelani River is hit by flooding and flash flooding yearly affecting more than 20,000 people each year (UDA 2019). There are more than 135,000 of the population live in Kelaniya Divisional Secretariat (DS) at the Kelani River basin (CEA 2018). The basin ranks third in the country in terms of water resources, it receives an average of 3,720 mm of precipitation or 8.520 million cubic meters of rainwater per year. This heavy annual precipitation is a factor in flooding, as most of the total precipitation falls on severe storms. Figure 1 shows the total area of inundation versus flood depth for different flood return periods at the Kanaliya area (Fowze et al. 2008). Figure 1 shows the high risk in the Kalani area as a populous city in Sri Lanka.

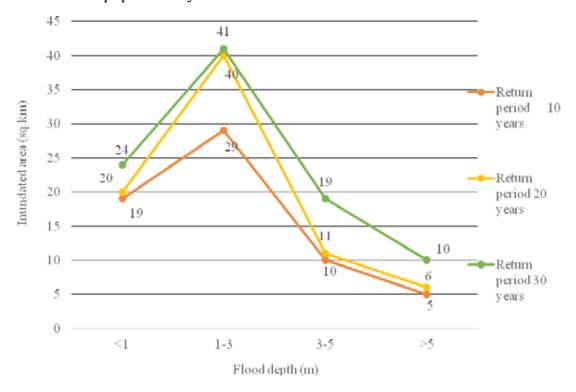


Figure 1: Total area of inundation versus flood depth for different flood return periods at Kanaliya area

2.2 Semi-structured interviews

Semi-structured qualitative interviews were conducted with three informants who directly connect with the government agencies at the subnational level in the planning and operations of disaster and Covid-19 pandemic management. Interview questions were related to problems, challenges, and their suggestions on the dual disaster of floods and Covid-19. The interviews were carried out with the Disaster Relief Services Officer- Kelaniya Divisional Secretary Office; Assistant Director of District Disaster Management Centre-Matale and Officer Commanding in Panideniya Covid-19 Centre. Three interviewees were selected based on their expertise in disaster management, community-level management, and Covid-19 spread mitigation.

3. Results and Discussion

3.1 Drivers

Covid 19 has different variants which have a significant impact on virus properties such as transmissibility. The occurrence of new variants decreases the effectiveness of available measures such as vaccines (Mahase 2021; Vasireddy et al. 2021; Duong 2021; Koyama et al. 2020). The occurrences of annual floods in the wet zone in Sri Lanka remains high and has increased over the decade, 25 major floods affected more than five million people (Eriyagama et al. 2017; Alahacoon et al. 2018; Sivakumar 2015; Alahacoon et al. 2018). The budget allocation for the State Ministry of Internal Security, Home Affairs and Disaster Management was reduced from 136 to 51 million LKR from 2020 to 2021 (MoF 2021). The budgetary allocations could be further reduced with the current economic crisis in Sri Lanka (A. De Silva 2021; Gunarathna 2021; Kadirgamar 2012). Urban areas are expanding rapidly to invade areas that were not previously considered for flood defences (Palliyaguru, Amaratunga, and Haigh 2010; [AICA 2013]. There are studies on integrated risk, however, the risk is case sensitive as socio-economic and environmental conditions are different (Shen et al. 2021; Ishiwatari et al. 2020; Borowski, Cedillo, and Stathopoulos 2021). New Covid 19 variants, frequent flood occurrences, economic crisis, unprecedented urbanization, and lack of research in integrated risk are identified as drivers of flood risk management during Covid 19 pandemic in Sri Lanka.

3.2 Pressures

Elderly people are more vulnerable to Covid 19 because of their low immunity. There are 48% of the total population is aged (greater than 60 years) in Kelaniya. Illicit sand mining and gem mining cause rapid changes in the flood plain (Abeysinghe and Samarakoon 2017; Surasinghe et al. 2020; Manage et al. 2020). Early Warning System functions in the Kelaniya but resources lack disaster relief work. It is evident from one interviewers' statement. Finding new evacuation centres is not easy as officers have to get permission from those who own the places

"If there is any sign of a flood, the Meteorological Department notifies the Disaster Management Center 72 hours in advance. Previously used camps do not have enough space to keep social distance" [A male officer of District Disaster Management Center, 50 yrs. old]

Community practice is not enough to deal with a situation of flood and Covid-19 simultaneously. It is evident from one interviewers' statement. Conflicts could arise between victims and officials in evacuation centres when implementing Covid 19 guidelines as victims are depressed too.

"There is no any example of flood evacuation centre during the pandemic. Still, there are no proper programs to train vulnerable people. I am not sure whether they know how to gather in a flood situation without being panic. People need to practice taking sanitary precautions while using common toilets in evacuation centres"

[A male officer of National Operation Centre for Prevention of Covid-19 Outbreak, 34 yrs. old]

3.3 Statuses

The number of evacuation centres has been increased with the assistance of the disaster management centre. Community participation is enhanced by selecting and coordinating

volunteers from different communities. Village voluntary organizations are prepared to face a flood disaster during the Covid-19 pandemic. Usually, each family should have their disaster bag which contains important documents, medical clinical cards, prescription drugs, sanitary wares, and other important things required in evacuation centres. Each one should have face masks and a piece of soap additionally when entering into the centres with the impact of Covid-19. 64.5% of the toat population has received fully vaccinated against the COVID-19 vaccine (WHO 2022).

Health authorities check the fever of people before getting them into the evacuation centers. If there are positive cases, then, they will be sent to intermediate care centers. If there are people with breathing issues, then they will be sent to hospital emergency beds and the associates of those covid 19 positive people, will sent into the quarantine centers. Health authorities have the duty of implementation of health guidelines and making the decisions.

Role of the governing party is to make the necessary changes in ordinances related to disaster management, ensure the safety of health authorities and the disaster management staff, implementation of a new flood management plan, implementing the original concept of flood defense, strengthen the implementation of the relief mechanism, direct the people living in low land areas to new houses by starting a new housing scheme project. Their opponents should guide and support them to make the necessary changes in the law and ordinances.

3.4 Impacts

By comparison, 1997-2006 and 2007-2016, the number of victims is increasing in highly developed areas, faster than in low-urbanized areas. As an example in the Gampaha district, the number of victims increases from 343,750 to 725,000 (JAICA 2013). Rapid urbanization mainly affects the flood risk management during Covid 19 pandemic in Kalaniya DS. It is evident from the responses of one interviewers' response.

"Most of the houses that were flooded were illegally constructed in lowland areas. Therefore, it will be better to direct the people living in those houses to new houses by starting a new housing scheme project." [A male officer of Disaster Relief Services Officer, 46 yrs. old]

Most potentially contagious people cannot be detected by temperature monitoring, so temperature screening is not sufficient as a primary means of reducing Covid-19 transmission (Facente et al. 2021; Mitra et al. 2020). Temperature screening in evacuation centres are not sufficient, therefore the Liaison officers from the office of the Medical Officer of Health (MOH) are required to stay in the evacuation centres.

3.5 Responses

Raising public awareness is needed to promote community activities such as hygiene promotion and early warning. People could be informed through programs from television, radio, and social media. Direct the people living in those invaded areas in the flood plain to new houses by starting a new housing scheme project, proposing new economic centres, and redirecting the settlements on flood-prone areas to those economic centres. Preparation and implementation of a new flood management plan are required by implementing the original concept of flood defence (as an example construction of levees). Create community leaders because they are well known about the essentials of the locals and preparation of village voluntary organizations.

Role of state agencies are relocation of flood victims to evacuation centers and, providing necessary cooked food and dry rations, support community activities and build the capacity of local communities, provide information, technical and financial support. Main role of non-state agencies is raising the public awareness (Ishiwatari *et al.*, 2020).

Due to the Covid-19, there was an island-wide curfew and because of that, economic activities were disrupted, while the closure of airports and ports severely disrupted export and import mechanisms. Also, Covid-19 has made a significant impact to the tourism sector. Tourism sector is the third largest source of foreign revenue for Sri Lanka. In fact, the major tourist destinations in Sri Lanka are also badly affected due to the travel bans imposed on domestic tourists. Because of these reasons, government is facing an economic crisis and it will impact for governance issues when allocating money for the benefits of the people. So, for next few years, politically government has to face troubles.

Community participation in public will be not as much as previous because still health authorities ask the people to avoid any congestion in the public. New variants are still reporting so, we can not predict how long this will go. Majority are vaccinated with both doses so adopting to the new normal life is the way to go in this scenario as many countries doing in this moment. Role of the state is to take the decisions according to the health officers and implement them in the correct way. Civil society have a huge responsibility to adhere to laws and health guide lines imposed by the government and the health authorities. Private sector has the responsibility to strengthen the economic status of the country and also involve to implement programs to raise public awareness of people in adopting to the new normal life.

4. Conclusions

Flooding is the most common water-related disaster and covid-19 is the most impacted pandemic in regards to Sri Lanka. In a flood situation during the spreading of Covid-19, it will be challenging to respond such as evacuation under the covid-19 health guidelines. So, it is better to focus on an overlap situation of the Covid-19 and flooding considering the Sri Lankan context. Although there are studies on integrated risk about flood and Covid-19 for other countries, the risk is case sensitive for the Sri Lankan context as socio-economic and environmental conditions are different. Hence, this paper reviews how to prepare and respond to a flood disaster during the Covid-19 pandemic. DPSIR framework is used in this study to assess flood risk management during Covid-19. The main drivers of this integrated risk are new variants, increment of flood occurrences, economic crisis, unprecedented urbanization, and lack of research in integrated risk. According to those drivers, pressure, status, impacts, and recommendations are discussed in the paper based on the semi-structured interviews and the report analysis. Main recommendations are although vaccinated still adhering to covid-19 health guidelines, vaccinated with the booster dose, conducting random PCR and rapid antigen tests to detect the covid-19 cases in evacuation centres, define the roles and responsibilities of all technical agencies, improve early warning and dissemination mechanism, strengthen the implementation of relief mechanism, preparation, and implementation of a new flood management plan, etc. Finally, further researches also need to do for other disasters such as drought, landslide, tsunami, storms, etc in the mid of the Covid-19 pandemic or any other global pandemic.

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Impact of Workplace Burdens Due to Covid-19 Pandemic on Employees Performance – in Apparel Industry

L D L Perera¹, A Wijayanayake¹ & A Withanaarachchi¹

The Sri Lankan apparel industry accounts for 7% of the country's GDP and employs 15% of the country's workforce. Frightening levels of spread and severity of COVID-19 have captured the attention of the apparel industry not only locally but globally. During this epidemic crisis, identifying the factors that affect the employees' workplace burden in the apparel industry is vital to the GDP of a country like Sri Lanka as the economy of the country relies on the growth in the Sri Lankan apparel sector. Each workplace burden has a distinct impact on employees' job performance. The objective of this study is to determine how the intensity of the Coronavirus 2019 (COVID-19) epidemic affects employees' workplace burden and performance. Thereby assisting policymakers in responding to how to overcome the workplace burdens of the employees during this epidemic crisis. A mixed research approach, with both qualitative and quantitative data analysis, was used in the research.

Initially by reviewing available literature from 2019 to present according to PRISMA criteria, identified the workplace burden factors during the pandemic. Considering industry experts' opinions, and similarities of the factors, four factors were finalized for the survey development. Those four factors were exposure to COVID – 19 and workplace preparation, job-related uncertainty in the future, workload and work-life conflict, and work-related relationships. Statistical tool; Partial Least Square(PLS) was used to analyze the data. As the ultimate findings, exposure to COVID – 19 & workplace preparation and, work-related relationships have a significant positive impact on employees' performance. The workload has a significant negative impact on the behavior & results-based employees' performance and has no significant impact on trait-based performance. Job-related uncertainty in the future has no significant impact on employees' performance.

As open-ended questionnaires, improving workplace safety regulations, developing employee online interactions, increasing immediate management attention on employees, establishing company profit improvement strategies are some of the suggestions to mitigate identified workplace burdens. These study findings; factors affecting workplace burdens must be addressed promptly by policymakers or employers in the Sri Lankan apparel sector in improving employees' performance ultimately improving industry performance.

Keywords: Apparel Sector Employees, COVID-19 Pandemic, Workplace Burden

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Gender Perspectives relating to Covid 19 in India

Seema Agrawal¹

Abstract

Women tend to be the backbone of society during crises, even as they are also more likely to face the disproportionate impacts of such crises. Worst and deepest effects from Women are always more deeply and worst affected by any disaster, civil war, riots or epidemic and they become more vulnerable or deprived.

The Covid-19 pandemic is no different. COVID 19 pandemic has severely exacerbated existing gendered barriers, widened India's gender gap in the workforce, and affected caregivers and frontline female workers. Worst and deepest effects from any disaster, civil war, riots or epidemics are on women and they reach the position of more vulnerable or deprived. The present paper explains gender inequalities in the context of the global pandemic COVID-19. This paper reviews the deeper social, political, economic and patriarchal impacts caused by and during the global pandemic. The present paper makes it clear that men were more affected than women by the immediate effects of Covid-19. Both the rate of infection and the death rate due to infection were seen more in men, but the longer and deeper effects of the pandemic will be on women which have been researched in the paper. This paper deeply reviews the deeper, long-term and years-long gender effects of Covid-19 on women.

The paper reviews the widespread economic, social impact on women on the basis of **Domestic violence**, **increased unpaid work**, unemployment and **wage cuts**, **gender pay gap**, **loss of jobs and increased responsibilities of cleaning and care related works**. The focus is on analyzing the long-term impacts like bad effects on **women's health** and **mental well-being** due to **reduced reproductive rights**, **less access to contraceptives**, and other family planning solutions, unwanted pregnancies **increased maternal mortality**, **non-availability of high-quality care**, **depletion of savings and assets**, **pandemic related widowhood** etc. The present paper sheds light on the gender disparity in the role of women during and after the pandemic, as well as the difficulties faced by them due to increased responsibilities of care related works and also reviews their possible solutions. Care responsibilities have increased due to the global pandemic, and most of their burden is going to fall on women. Care related options were inadequate even before the global pandemic, but women are at risk of being left behind due to the burden of pandemic responsibilities.

The study is purely qualitative in nature and attempts to throw light on the impact of COVID -19 on women. Data analysis on the basis of Google form surveys, interviews and other secondary resources was conducted to understand various visible and less visible, immediate and long-term effects on Women. The research tool used for analyzing the data was amassed from different sources for this study is content analysis and the research method is descriptive research. This study makes use of secondary data. Secondary sources of data used are journals, working papers, search engines, scholarly articles, research papers, and other academic publications.

Reviewed the deep social, economic, political, patriarchal impacts of the post-pandemic there are some recommendations like **paid leaves**, **policy changes**, **stimulus packages**, **modified**

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schedules, onsite childcare options, market-based solutions to address family care and health issues as well as the need to prioritize the responsibilities of care to the government, entrepreneurs, investors for inclusive growth and gender equality.

Key words: gender impacts, Onsite childcare, widowhood

Women tend to be the backbone of society during crises, even as they are also more likely to face the disproportionate impacts of such events. The Covid-19 pandemic is no different. COVID 19 pandemic has severely exacerbated existing gendered barriers, widened India's gender gap in the workforce, and affected caregivers and frontline female workers.

The reality is that women are still denied basic facilities in most societies, women do not get the benefits of health, nutrition and higher education opportunities as men. Even today, the patriarchal system prevails in the society in which male domination takes place. Often men are the owners and actors of the house. Even if women contribute financially to the maintenance of the family, there is no ownership of the family. Men often stay away from home. In this way, working women have to put more emphasis on the care of children. If we analyze this in the context of epidemic disasters or the current global pandemic Covid-19, then we see deeper, longer and gender impacts on women. If we talk about the global pandemic Covid-19, then men are more affected than women due to the immediate effects of Covid-19 because both the rate of infection and the death rate from infection is higher in men. but the long-term effects of pandemic are more likely to happen on women. This shadow pandemic can be seen in a spike in domestic violence as girls and women are sheltering-in-place with their abusers; the loss of employment for women who hold the majority of insecure, informal and lower-paying jobs; the risk shouldered by the world's nurses, who are predominantly women; and the rapid increase in unpaid care work that girls and women mostly provide already. Based on the analysis of various data, it is found that during the global epidemic, domestic violence cases increased by 2 to 3 times all over the world. At the same time, their reproductive rights and availability of health facilities were greatly reduced. This has led to an increase in women's health-related gender disparity as well as the possibility of long-term ill effects on women's health due to non-availability of their reproductive rights, increased maternal mortality, non-availability of high-level care, etc. Also, during the time of the global epidemic, the 'responsibilities related to the care' of women greatly increased. During the epidemic the unpaid work of women has increased due to the increase in special care related tasks of family and children. Most of the burden of care and other work has been placed on women more than men, due to which the difficulties have increased more. Care options were inadequate even before the global pandemic, but women are more likely to be left behind due to these increased responsibilities after the pandemic. Generally, the worst, deepest and long-term effects of any disaster, war, riots or epidemics are on women and they become more neglected and deprived. The spread of unemployment and wage cuts, gender pay gap, loss of jobs etc. are more for women due to this epidemic and its macroeconomic and social impact will also affect women more. According to a UN policy brief on the impacts of covid 19 on women, 'across the globe, women earn less, save less, hold less secure jobs, are more likely to be employed in the informal sector. They have less access to social protections and are the majority of single-parent households. Their capacity to absorb economic shocks is therefore less than that of men."

The COVID-19 pandemic is clearly aggravating economic inequalities faced by women. The result of these increased works is that women get badly involved in the work both at home and outside. "Who is doing so much useful work or whose contribution to the family - these

feelings are often talked about." But 'useful work' and 'contribution' are never represented in clear terms, so women are not able to get the fair value of their labor.

Dalberg conducted one of the largest studies of the socio-economic impacts of Covid-19 on women in low-income households, which pointed out that there is a multi-generational impact of poor nutrition, lack of access to contraceptives, and debt.

India's unemployment surge has disproportionately befallen women. Women's labour force participation has fallen to 11%, compared to 71% for men. Women were more affected than men by employment issues. Women made up just 24% of those working before the pandemic yet accounted for 28% of all those who lost their jobs. Poor women have had to borrow money from extended families and former employers. The lack of economic autonomy has pushed wives to depend more on husbands. Women across India have suffered from corroded freedom and domestic violence.

Loss in incomes for women as well as their households led to reduction in food supply and women were affected more than other members of the family.

India also faces a digital gender-divide. Only 21% of women use the internet. Very few women have a computer or laptop to do their work from home. There is a Very long-term effect on girls' education because they are not having access to online education. Patriarchal norms empower husbands and other male relatives to regulate the usage of mobile. This regulation hampers women's ability to participate digitally, acquire relevant skills, and capitalize on work opportunities.

Women's health indicators also deteriorated because they could no longer afford contraception and menstrual products. About 16% of women (an estimated 17 million if extrapolated) had to stop using menstrual pads, and more than one in three married women were unable to access contraceptives.

Covid-19 has upended years of progress on women's unpaid care work, as the burdens on caring have risen by 30%. Whatever efforts men might have made the pandemic's outset to share labour have been short-lived. Increases in household work also restrict time for women to pursue other economic opportunities. Indian women already do almost three times more unpaid work than Indian men, and the survey showed a 47% increase in unpaid labour for women, and a 41% increase in unpaid care work for women. Women from marginalized groups like the poor, migrants, single/separated/divorced, were more affected than the average woman. The variance is across the board, with more single, separated/divorced women having more probability to lose their jobs and livelihood.

Conclusions

António Guterres, the UN Secretary General, requested governments to "put women and girls at the center of their efforts to recover from COVID- 19."

At every level of government, gender-specific data on Covid-19's impacts must be collected. This will ensure the development of sound policies that address women's needs.

Focus on the inclusion of single, divorced/separated women in the One Nation One Ration Card rollout, and build social assistance programmes for informal workers, specifically domestic

workers and casual laborer's robust safety net is necessary, which ought to include supportive schemes such as pensions, paid sick leave, and equal pay regulations.

According to a survey, one in three women said that government welfare schemes and SHGs had played an important role in helping them navigate the pandemic., The Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), the Pradhan Mantri Jan Dhan Yojana, and the public distribution system (PDS) supported 12 million, 100 million, and 180 million women respectively during the crisis.

Thus, there is a need for universalising, deepening, and extending the government schemes and SHG setups in order to help every woman come out of the ill impact from the pandemic as soon as possible.

Making the right investments in women's issues now could prove transformational in the long-term recovery and health of our economy and society

There should be a change in unpaid leave policies so that women can take care of enhanced household work and family care and health related problems without losing their jobs or savings. For mitigating any gender impacts of any crisis there should be an increase in care giving facilities, qualitative changes in policies, incentive package, modified schedule, onsite childcare market-based solutions etc. There is a need for the government entrepreneurs to prioritize care related activities for development and for society's gender equality and a positive environment for women. Because a woman is a woman as well as a human being. She is half the population of the world and as a human being she has equal human rights, so it is necessary for her to create equal opportunities, equitable society, inclusive development and a just system. For this, the participation of women will have to be increased at the level of every policy making so that structural change can be brought, only then the goals of women empowerment, gender equality and inclusive development can be achieved. For this, women themselves also have to get strength. Development of leadership capacity, important role in formulation of policies, increase in education, training, opportunities, employment and capacities and at the same time, the patriarchal relations will have to be organized in order to have maximum control over their lives.

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Enhancing Contemporary Teaching Skills to Address the Changing Role of Teachers as a Result of the Long-Term Social Impacts of the Covid-19 Pandemic

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Abstract

Education has changed in many ways with the impact of the Covid-19 pandemic. The traditional teaching methods were challenged by the pandemic, hence, teachers had to adapt to new teaching methodologies, offer their courses virtually, arrange attractive digital learning environments, assess student progress online, keep students motivated and engage them digitally in a meaningful and pedagogical way. Sri Lanka has long had a strong institutionalized direct instructional teacher education culture through which teachers were trained for face-to-face instruction, however, Covid-19 related pedagogical challenges require the empowerment of teachers with contemporary teaching skills.

This paper is a qualitative content analysis of the potential of the new Teacher Education program designed as a collaborative EU co-funded Capacity Building project CONTESSA, the Contemporary Teaching Skills for South Asia (https://contessa-project.eu/) to fulfill the needs of teacher education at present. The analysis was on the appropriateness of content and utility of instructional design to meet the challenges of teaching-learning that might continue in the post-Covid-19 context. The teacher education curriculum which is a comprehensive package of five modules is found to have potential design features of modules that were identified in terms of continuity of teaching design, delivery, and assessment, facilitation of the role of technology for learning and teaching cum strategic actions for blended learning, and the focus on student-centered and inclusive education. It can be concluded that the approach developed through CONTESSA is having progressive features to address the long-term effects to the teacher education and intended outcomes of the teacher education programs such as: improving digital teaching skills, and critical skills, improving the transition of learners at critical stages and of learners at risk, improving the progress of learners with special needs or migration backgrounds.

A recommendation is made to incorporate these open-source teacher education modules into preservice and in-service teacher education programs in Sri Lanka and South Asia and develop other parallel modules on similar frameworks

Keywords: Digital teaching, teacher education, contemporary teaching skills, curriculum development

Introduction

Covid-19 has presented many higher education teachers (HETs) with the challenge of offering their lessons digitally. As recent studies have shown, the majority of HETs were largely unprepared to make the shift to online teaching when the COVID-19 pandemic began and had difficulties adapting to new teaching methodologies, modifying their course structure,

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arranging attractive digital learning environments, assessing student progress, keeping students motivated and engaging them online in a meaningful and pedagogical way. Higher education students (HESs) faced challenges as well. Due to teacher time constraints and a lack of face-to-face engagement, students have received less personalized feedback and fewer assessments of their individual work thereby providing them with a low level of understanding of their learning progress. They also face multiple learning formats designed by teachers who have not been trained in online course design, making the materials ineffective in the digital space. (Gabriels, W., & Benke-Aberg, R. 2020; Marinoni, G., van't Land, H., & Jensen, T. 2020; Tang, T., Abuhmaid, A.M., Olaimat, M., Oudat, D.M., Aldhaeebi, M., & Bamanger, E. 2020; Hummel, S., Sheehan, B., Monirith, L., Munasinghe, D.M.W., Thilakarathna, S. 2021h)

These findings show that digitization of higher education (HE) is experiencing an unprecedented rise due to the COVID-19 crisis and herein lies enormous potential for new paths of student-orientation, individualization and the orientation towards special needs fostering a common sense of equity and inclusion. Pedagogical practices have been greatly affected by the advancement of science and technology during the pandemic crisis. In order to use digitization in a learner- and target-oriented way however, it is important to look at real requirements and risks for the HE system in order to derive the greatest benefit from the opportunities that arise. The education systems can only face Covid-19 related educational challenges if they offer their students the best possible (digital) study conditions and HETs the necessary tools and digital expertise for their professional pedagogical responsibilities. By improving the teaching skills of teacher trainers and (future) teachers, we can achieve lasting individual and societal changes (e.g., enhanced self- determination, critical thinking and tolerance). Even before the COVID-19 pandemic, teachers were increasingly expected to utilize digital technologies in the classroom to help students succeed. After the pandemic began, these expectations soared as physical learning environments migrated to virtual spaces. Therefore, the investment in digital teacher training and development has made this priority more imperative than ever before. However, digitization is not a solution in itself and it must be applied to competence-oriented as well as teaching and learning-centric needs. Accordingly, teacher quality has a direct positive impact on student success. CONTESSA has been designed with this consideration at the forefront.

Objectives and Method

CONTESSA is an Erasmus+ project funded by the European Commission's Capacity Building in Higher Education branch. The project is led by Dr. Sandra Hummel, University of Graz (Austria) who is the first author of this paper and aims to further the development of teaching skills in Asia working with Sri Lanka and Cambodia through carefully selected partnerships with institutions of higher education and local educational organizations.³ The project development was collaboratively done by the University of Colombo (Sri Lanka), Open University of Sri Lanka (Sri Lanka), University of Cambodia (Cambodia), and Paññāsāstra University of Cambodia (Cambodia).⁴ The second author of the paper is the National Coordinator of the project for Sri Lanka.

The intent of this study was to analyse the potential of the new Teacher Education program designed as a collaborative EU co-funded Capacity Building project CONTESSA, the

³ The project's full partners are: Technical University of Dresden (Germany), University of Colombo (Sri Lanka), Open University of Sri Lanka (Sri Lanka), University of Cambodia (Cambodia) and Paññāsāstra University of Cambodia (Cambodia).

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Contemporary Teaching Skills for South Asia (https://contessa-project.eu/) to fulfill the needs of teacher education at present especially in the post-Covid -19 context in Sri Lanka and in general in Asia. The project

A qualitative content analysis was conducted in order to investigate the potential and impact of the new teacher education program provided through CONTESSA. The content was analysed using grounded theory methodology (Glaser & Strauss 2008). The analysis was on the appropriateness of content and utility of instructional design to meet the challenges of teaching-learning that might continue in the post-Covid-19 context. Based on the content A thematic analysis was carried out for the systematic, intersubjectively comprehensible description of content-related and formal features of the CONTESSA programme. The focus of the analysis is primarily on the pedagogical content in view of educational challenges related to Covid-19.

Findings: Thematic content analysis of Contemporary Teaching Skills for South Asia, CONTESSA

The CONTESSA faces gaps for HE teacher education that have opened up during the COVID-19 pandemic and worked out adequate solutions for advancing contemporary teaching formats in the HE sector. Since digitization is not a solution in itself, the project design for this project was guided by rather pedagogical than technical questions such as: Which innovative approaches and practices for further improving HE teaching and learning need to be developed, offered and implemented into the HE systems to ensure effective (digital) transformation processes during and also after the COVID-19 crisis? What do HE teachers need to be equipped with the necessary skills to leverage the current and emerging challenges and to enhance their professional practice in face-to-face, hybrid and digital environments?

CONTESSA integrates lessons learnt from the past two years in which the educational system was bound to adapt to the new pandemic-related requirements (Vithanapathirana, M., 2021). It provides approaches to learning and teaching with a wide range of didactic methods, target-oriented and learner-oriented planning, provide examples of how to establish concrete lifeworld references and offer real case-studies and video of classroom situations (Hummel et al. 2021e). Self-reflexion and individual professionalisation processes are a main focus of the two core elements this new didactic programme consists of – namely:

a) A Train-the-Trainer programme that supplies teacher trainers with the skills and information needed to transfer knowledge to teachers and trainee teachers

To arrive at a more modern form of teacher education, first of all teacher educators as one main target group have to be addressed. A comprehensive train-the-trainer programme allows teacher educators to become acquainted with contemporary educational theories, approaches and methods, including the following topics:

- Planning teaching and learning for student teachers
- Enhancing pedagogic professionalization processes
- Supporting individual student development
- Mentoring
- · Assessing student learning
- Trainer tutorial

b) An e-course for teacher training with five open access online modules focusing on integral contemporary teaching skills

Five online-modules that serve as a comprehensive teacher education programme for the achievement of contemporary teaching competences are developed that are made up of fully worked-out contents and tasks. The modules for teacher education contain key elements that include contemporary teaching methods and aim at improving the teaching skills of student teachers, such as the following (Hummel et al. 2021c):

- Building Blocks of Primary Education
- Excellence in Teaching: Profession-Specific Competences of Primary School Teachers
- Learner-Centred Primary Education: Enhancing Co-Created Learning Processes
- Embracing the Differences: Pedagogic Approaches to Diversity, Heterogeneity and Special Needs
- Digital Teaching and Learning

The online modules include:

- Audio files for theoretical content mediation
- Practical case studies for problem-based learning
- Specific tasks for reflection on the contents
- Compulsory as well as freely selectable additional literature
- Individual editing formats for transfer to the teachers' own lessons
- Creating a teaching portfolio as a development tool for individual teaching skills

Educational long-term impacts of the CONTESSA programme

In the investigation of the potential and impact of the new teacher education program provided through CONTESSA, the a number of categories emerged. Successive categories were formed through an alternating and repetitive process of data collection and analysis that yielded the following themes in view of the acquisition and development of teaching skills related to the challenges of the educational situation during and after the Covid-19 pandemic:

Communication, presentation and media competence

One of the central research outcomes substantiated with CONTESSA is that teachers are systematically guided on how to explain things in a clear and concise way and to take into account the relationship level to the learners. Presenting information illustratively and effectively – also in virtual learning environments - is treated as a key skill in getting your message across and therefore considered as fundamental for distance learning. Presentation skills and media competence are integrated as central components for contemporary learning and teaching situations and are practically applied in the various pedagogical assignments of the CONTESSA modules. This interlinkage between theoretical foundation and practical application is a basic requirement of the educational challenges due to Covid-19.

Creating learning arrangements

The analysis revealed that teachers are enabled to acquire knowledge regarding methods of creating stimulating teaching-learning settings in terms of spatial and also social arrangements – also in virtual environments. The involvement of learners in virtual environments who are

not considered as 'receptacles' of knowledge but of individuals who create their learning actively and uniquely is considered as one of the most fundamental potentials of the CONTESSA programme with long-term effect on education.

Accompanying individual learning processes

An effective teacher is always a mentor and accompanies individual learning processes. The CONTESSA acknowledges the consideration of learning difficulties, individual learning conditions, developmental requirements as well as learning motives and how they can be considered in classroom situations in the CONTESSA programme.

Making life-world references

Making real-world connections and referring to the life-concepts of the students is important in achieving comprehension-oriented learning processes. Ways to make life-world references are addressed in the theoretical and practical approaches of the CONTESSA modules which is also considered indispensable for successful in-person as well as remote teaching and learning scenarios.

Enhancing the ability to engage

CONTESSA introduces various paths for teachers to find engaging resources and materials for learners allowing them to acquire comprehensive and deep knowledge, formulate target-oriented assignments and opt for methods allowing the students to develop skills and competencies in an individualized and differentiated way (Hummel et al. 2021f).

Ability to empower

Teachers acquire the ability to empower students to think critically, be innovative, creative, adaptable, passionate, and flexible. They learn to encourage them to be able to solve problems, self-direct, and self-reflect. CONTESSA equips pedagogues with methods for online arrangements encouraging learners to deal with learning content in a highly differentiated way.

To sum up, the results of the qualitative content analysis of the CONTESSA programme yielded the following educational long-term impacts:

- Delivering a 'step-change' in the development of critical skills, knowledge and competences to provide the foundations for participation in work and society
- Improving the transition of learners at critical stages in the education and training system
- Increasing the use of ICT in teaching and learning as flexible learning paths for individual development
- Improving the learning experience and the success of learners: Increase the quality of early years to deliver a better learning experience for young children
- Improving the progress of learners at risk of educational disadvantage or learners with special educational needs
- Improving the progress of learners with migration backgrounds

Furthermore, it can be highlighted that the CONTESSA programme pays particular attention to the specific ethnic and cultural characteristics of the target groups in both partner countries. In order to reach all teachers, also those with weak English language skills, the materials provided by CONTESSA was translated from English into Khmer for Cambodia and into Sinhalese and Tamil for Sri Lanka and videos have been provided with subtitles in the mentioned languages. This is considered as central for an inclusive online course.

Summary

CONTESSA includes educational diversifications as needed during and after the corona crisis with the potential to fundamentally change the nature of education in the long term. It opens up new paths for a teacher education programme that builds upon the latest research findings in the field of higher education didactics. This project is centred on curriculum development and provides innovative learning and teaching tools, methodologies, and pedagogical approaches including learning outcomes and ICT-based practices by means of flexible learning paths. A comprehensive train-the-trainer programme, as well as five modules for the mediation of teaching skills to student teachers and in-service teachers, has been developed. They include contemporary elements of a teacher education set up according to the acquisition of today's key competencies that pupils require in order to be capable of leading a self-determined life.

The didactical skills strengthened through the CONTESSA project enhance the comprehensive teaching and learning experiences for both students and teachers. Through the activities and assessments of CONTESSA, teachers will understand, practice, and learn to apply their pedagogical and digital competencies in real-life scenarios through a virtual environment thereby significantly impacting the learning paths of their students.

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Study of the Adaptive Expertise Among Lecturers in University of Peradeniya, Sri Lanka During the Covid-19 Pandemic

G W U D Ganegoda¹ & J A C K Jayawardena²

People's capability of successful adaptation to novel and non-standard situations is called adaptive expertise (AE). The ongoing COVID-19 pandemic has created an altered academic environment in the universities and therefore both students and staff have to adapt to a novel working environment. This study aimed to explore the dimensions of AE and measure it among the lecturers at the University of Peradeniya during the COVID-19 pandemic.

A descriptive cross-sectional study was conducted among 151 lecturers, including 85 female lecturers (56.3%) and 66 male lecturers (43.7%) at the University of Peradeniya. The questionnaire, which had been employed in previous studies were used for data collection after some modifications. The questionnaire was administered on the online platform using google survey forms. Descriptive data statistics, Exploratory Factor Analysis (EFA), and reliability testing were performed to analyze the data.

After EFA, four factors were identified: domain specific skills, metacognitive skills, innovative skills, and personality traits. Items in each dimension revealed a reliability value of (Cronbach alpha) more than 0.8. The mean score for the AE among lectures in the sample was 4.04 ± 0.47 . The highest and lowest mean values were recorded by the domain skills (4.21 ± 0.55) and personality traits (3.76 ± 0.71) respectively.

According to the calculations of the present study, the highest possible score that could be obtained for AE was five points. Therefore, university lecturers showed a higher level of AE which was more contributed by the domain specific skills. Their AE was composed of four dimensions. Personality traits have been identified as the new dimension. In-detail exploration is needed for a definitive conclusion about personality traits to AE.

Keywords: Adaptive expertise, COVID-19 pandemic, Sri Lanka, University lecturers, University of Peradeniya

1. INTRODUCTION

1.1 Adaptive Expertise

The evolvement of the working environment is a continuous process to address the increasing complexity of the needs and demands of the population. Unexpectedly, the ongoing COVID-19 pandemic or the Coronavirus Disease 2019 which firstly emerged in December in Wuhan, China (*Archived: WHO Timeline - COVID-19*, 2020) drastically triggered the process of the evolvement of the working environment. Physical working platforms were converted into digitalized virtual environments and tasks and responsibilities were reorganized. Furthermore, working environments were introduced with new terms, for instance, work from home, social distancing, lockdown which confirmed the complexity of the present working background. The successful survival against the rapid transformation couldn't be achieved only through standard protocols (Cutrer & Ehrenfeld, 2017). Therefore, people should be adapted and create solutions and ideas to the situations accordingly.

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The concept of the adaptation according to the situation in a meaningful manner and the "Adaptive Expertise" framework was firstly introduced by Hatano and Inagaki (1986). Several authors defined AE in different ways but quite similar perspectives. Bohle Carbonell et al. (2014) stated AE as the capability of people to perform successfully in the changing working environment related to job tasks and ways of performing them. Johnson (2001) described AE as making behavior modifications about the changes and alterations of new environments, situations, or events. Accordingly, AE is an important characteristic one should possess to be successful in situations where regular job tasks must be performed in unpredictable situations (non-standard). Such a similar situation is created with the current pandemic and the AE concept remarkably plays a significant role.

The COVID-19 pandemic drastically affected the educational sector as in all other fields. Almost all the universities and schools in affected countries had to shift to alternative modes of teaching which are quite challenging for many teachers in the universities and schools. When face-to-face teaching sessions are shifted to an online mode, it needs additional preparations, technological skills, and creativity, which could be quite challenging for most teachers. It is more challenging if teachers lack an awareness of how they can exploit their routines from adaptive perspectives (Mannikko & Husu, 2019). Teaching in complex situations often demands new insights. Therefore, readiness and acceptance of the challenge by the university teachers play a crucial role in the success of compensatory mechanisms in regaining the sound teaching programs during the COVID-19 pandemic.

1.2 Dimensions of AE

Since the time of introduction of the word AE, several dimensions have been introduced to characterize AE (Charbonnier-Voirin & Roussel, 2012; Pulakos et al., 2000). The latest literature identifies that AE has three dimensions; domain, metacognitive and innovative skills (Bhole Carbonell et al., 2015).

A recent study conducted among university teachers of a European university revealed a correlation between AE and the perceived work performance of lecturers (Jayawardena, 2020) using the inventory developed by Bohle Carbonell et al. (2015) which was based on three dimensions. Moreover, she highlighted the importance of developing AE among lecturers. Although domain and innovative skills were identified as characteristics of AE of university teachers Jayawardena (2020) strongly suggested the importance of investigation of contribution metacognitive skill dimension for AE among university lecturers. Furthermore, Jayawardena (2020) claimed that some aspects of metacognitive skills had not been captured by the inventory developed by Bhole Carbonell et al. (2015). Therefore, the present study aimed to investigate the dimensions of AE of lecturers at a university in Sri Lanka during the COVID-19 pandemic using a modified version of the inventory used by Jayawardena (2020).

2. METHODOLOGY

2.1. Study Design and Settings

A descriptive cross-sectional study was conducted from June to August 2021 including all nine faculties of the University of Peradeniya, Sri Lanka.

2.2. Study Participants

The convenience sampling method was used to collect data. The total number of university lecturers was recorded as 833 according to the statistical data recorded in https://www.pdn.ac.lk. However, only 796 e-mail addresses could be obtained from the official websites of each faculty. Seven e-mails were marked as not delivered. Lecturers who were on study leave were excluded. Therefore, only 784 personal emails were delivered to the university lecturers. Only 151 lecturers were consented and participated in the study.

2.3. Data collection

2.3.1. Data collection inventory

The inventory developed by Jayawardena (2020) for measuring AE was modified and pretested before administration. The original questionnaire was in English and the same was used after modifications as the official language for communication among lecturers is English. Modifications were made by adding items that explore the metacognitive element relevance to teaching and some general questions and consisted of 28 Likert-type items. In addition, to the items in the inventory, primary basic demographic data of gender, age, faculty, current academic position were collected.

2.3.2. Data Collection Procedure

Ethical approval was taken from the Ethical Review Committee of the Faculty of Allied Health Sciences, University of Peradeniya (AHS/ERC/2021/039). The inventory was administered on an online platform using the google forms tool (Google LLC, California, USA). Permission to circulate the questionnaire among university lecturers was taken from the respective Deans of nine faculties. Personal e-mails were sent to the e-mail addresses which were obtained from the official websites of each faculty. The informed consent was requested from each lecturer via the online form after presenting the information sheet. The data was collected anonymously and stored confidentially. The required data were extracted to a Microsoft Excel sheet directly from the google form website. Then the data was exported to the SPSS 25.0 package for the statistical analysis.

2.4. Data analysis

Demographic data of the participants were calculated using descriptive statistics. Before proceeding with the factor analysis sample adequacy was tested by Kaiser Meyer Olkin (KMO) and Bartlett's Test of Sphericity. Exploratory Factor Analysis (EFA) was performed to identify the factor distribution of the survey items. EFA is directed towards the identification of a new factor structure that consists of a better model fit (Thompson, 2004).

Initial calculations of EFA and, the correlation matrix of association were analyzed by Principal Component Analysis (PCA). Three items were removed due to low communality values. Factors to be extracted were identified based on the "eigenvalue greater than 1 rule." These extracted factors were compared with a parallel analysis (Horn, 1965). The parallel analysis performed a second EFA. Rotation strategies were applied. The rotated factors were then tested for reliability. Descriptive statistics were performed to calculate scores for AE and other factors (dimensions).

3. RESULTS

3.1. Demographic characteristics of the study participants

The sample consisted of 151 lecturers from all nine faculties of the University of Peradeniya. There were 85 female lecturers (56.3%) and 66 male lecturers (43.7%). The age range was between 25 to 65 years and the mean age was 44.38 ± 0.98 years. The number of lecturers and gender distribution among nine faculties are shown in Table 3.1.

| Faculty | Female | Male | Number of participants & percentages |
|--|--------|------|---|
| Faculty of Arts | 12 | 4 | 10.6% (16) |
| Faculty of Agriculture | 8 | 5 | 8.6% (13) |
| Faculty of Allied Health Sciences | 12 | 3 | 9.9% (15) |
| Faculty of Dental Sciences | 9 | 5 | 9.3% (14) |
| Faculty of Engineering | 3 | 21 | 15.9% (24) |
| Faculty of Management | 9 | 1 | 6.6% (10) |
| Faculty of Medicine | 11 | 5 | 10.6% (16) |
| Faculty of Science | 16 | 18 | 22.5% (34) |
| Faculty of Veterinary Medicine and Animal Sciences | 5 | 4 | 0.6% (09) |
| Total | 85 | 66 | 151 |

Table 3. 1 - Distribution of lecturers of the sample

Since the number of participants from each faculty was small, subsequent analysis was made without consideration of the specialties of the respondents. The sample consisted of several categories of lecturers, and Table 3.2 shows their mean age and mean experience in the present position. Most and least number of the participants of the sample were senior lecturers (Grade II) and lecturer (permanent) respectively. The majority of the sample (70.9%) hadn't heard the term "Adaptive Expertise."

| Number of participants | Percentage (%) | Mean age (in years) | Range of years | Mean experience in the current position (in years |
|------------------------|---------------------------------|---|---|--|
| 15 | 9.9 | 28±4.07 | 25-42 | 1.69 |
| | | | | |
| 28 | 18.5 | 32.68±5.88 | 27-58 | 3.10 |
| 4 | 2.6 | 35.50±3.11 | 32-39 | 7.50 |
| 24 | 15.9 | 54.12±7.79 | 40-65 | 16.50 |
| 37 | 24.5 | 42.05±6.54 | 33-56 | 7.07 |
| 33 | 21.9 | 53.79±6.20 | 41-64 | 7.56 |
| 10 | 6.6 | 59.50±2.88 | 56-65 | 9.60 |
| | 15 28 4 24 37 33 | participants (%) 15 9.9 28 18.5 4 2.6 24 15.9 37 24.5 33 21.9 | participants (%) (in years) 15 9.9 28±4.07 28 18.5 32.68±5.88 4 2.6 35.50±3.11 24 15.9 54.12±7.79 37 24.5 42.05±6.54 33 21.9 53.79±6.20 | participants (%) (in years) of years 15 9.9 28±4.07 25-42 28 18.5 32.68±5.88 27-58 4 2.6 35.50±3.11 32-39 24 15.9 54.12±7.79 40-65 37 24.5 42.05±6.54 33-56 33 21.9 53.79±6.20 41-64 |

Table 3. 2 - Distribution of lecturers according to age and their experience

3.2. Sample Adequacy

KMO and Bartlett's Test of Sphericity was performed to identify the adequacy of a sample size to proceed with the further calculations of factor analysis. KMO results obtained for the present study was 0.835. Therefore, the interpretation regarding the obtained score was meritorious, as indicated by Kaiser, H. F. (1974) (Table 3.3).

| KMO measure | Interpretation |
|-------------------|----------------|
| KMO ≥ 0.9 | Marvelous |
| 0.80 ≤ KMO < 0.90 | Meritorious |
| 0.70 ≤ KMO < 0.80 | Average |
| 0.60 ≤ KMO < 0.70 | Mediocre |
| 0.50 ≤ KMO < 0.60 | Terrible |
| KMO < 0.50 | Unacceptable |

Table 3. 3 - Interpretation of KMO measures *Note*. Source: Kaiser, H. F. (1974).

Bartlett's Test of Sphericity is performed to test the null hypothesis that the correlation matrix is an identity matrix. Therefore, a significant statistical test (less than 0.05) should be considered to proceed with the factor analysis. The present study results obtained for Bartlett's Test of Sphericity showed to be significant. Therefore, the results of KMO and Bartlett's test proved that the data of the present sample is appropriate for factor analysis (Table 3.4).

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | 0.835 |
|---|-------------------------|
| Bartlett's Test of Sphericity | |
| Approx. Chi-Square Df Sig. | 1704.220 300 .000 |

Table 3.4- KMO and Bartlett's test results

3.3. Exploratory Factor Analysis

EFA was conducted to test the construct validity and the internal consistency of the inventory. There were 28 items in the inventory. During EFA, an item was retained if it was loaded greater than 0.3 on the relevant factor. The highest loading value was considered when selecting items into the appropriate factor. EFA was conducted using eigenvalues of 1.0 and principal component analysis and varimax rotation, which is an orthogonal rotation method commonly used for factor analysis (Osborne, 2015). All four factors explained 54.36% of cumulative variance. The EFA results of the total variance explained chart are shown in (Table 3.5).

| | Initial Eiger | nvalues | | Extraction Sums of Squared Loadings | | | |
|-----------|---------------|---------------|--------------|-------------------------------------|---------------|--------------|--|
| Component | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | |
| 1 | 7.629 | 30.514 | 30.514 | 7.629 | 30.514 | 30.514 | |
| 2 | 2.205 | 8.819 | 39.333 | 2.205 | 8.819 | 39.333 | |
| 3 | 2.106 | 8.425 | 47.759 | 2.106 | 8.425 | 47.759 | |
| 4 | 1.651 | 6.604 | 54.362 | 1.651 | 6.604 | 54.362 | |
| 5 | 1.378 | 5.512 | 59.875 | | | | |
| 6 | 1.011 | 4.045 | 63.919 | | | | |
| 7 | .894 | 3.577 | 67.496 | | | | |
| 8 | .813 | 3.252 | 70.748 | | | | |
| 9 | .786 | 3.144 | 73.893 | | | | |
| 10 | .705 | 2.820 | 76.713 | | | | |
| 11 | .662 | 2.647 | 79.359 | | | | |
| 12 | .642 | 2.568 | 81.928 | | | | |
| 13 | .576 | 2.304 | 84.231 | | | | |
| 14 | .516 | 2.065 | 86.297 | | | | |
| 15 | .460 | 1.841 | 88.138 | | | | |
| 16 | .452 | 1.806 | 89.944 | | | | |
| 17 | .407 | 1.629 | 91.574 | | | | |
| 18 | .367 | 1.469 | 93.043 | | | | |
| 19 | .341 | 1.364 | 94.407 | | | | |
| 20 | .307 | 1.230 | 95.637 | | | | |
| 21 | .301 | 1.204 | 96.841 | | | | |
| 22 | .250 | .998 | 97.839 | | | | |
| 23 | .217 | .868 | 98.707 | | | | |
| 24 | .192 | .768 | 99.476 | | | | |
| 25 | .131 | .524 | 100.000 | | | | |

Extraction Method: Principal Component Analysis.

Table 3.5-EFA results showing the total variance explained chart

Finally, four factors (dimensions) were identified, and they were shown in Table 3.6 with the relevant items and Cronbach's alpha values for each factor. A reliability test was performed to determine the internal consistency of EFA results to confirm that they were fit for the purpose. Cronbach's alpha was used to test the stability and internal consistency within each dimension and overall inventory (Taber, 2018). Cronbach's alpha values for all the four dimensions and the overall inventory were above 0.8 (Table 3.6).

| M | | | | |
|---|--|--------------------------------------|------------------------------------|--------------------------------|
| ltem | Factor 1: Domain specific skills | Factor 2: Metacognitive skills | Factor 3: Personality traits | Factor 4: Innovative skills |
| | α=0.835 | | | |
| 3. I gained a better understanding of concepts in my discipline. | 0.727 | | | |
| 7. I was able to develop and integrate new knowledge with what I have learned in the past. | 0.716 | | | |
| 10. I was able to assess insufficiencies in my skills to perform a specific task or solve a particular problem. | 0.653 | | | |
| 6. I showed that I am willing to keep on learning new aspects related to my discipline. | 0.642 | | | |
| 9. I was able to assess insufficiencies in my knowledge to perform a specific task or solve a particular problem. | 0.627 | | | |
| 2. I realized that knowledge in my discipline keeps on developing. | 0.626 | | | |
| 5. I concerned myself with the latest developments in the domain of my discipline. | 0.589 | | | |
| 1. I realized that I need to learn continually to become and stay as an expert in my field. | 0.548 | | | |
| 4. I was able to indicate the reasons for any obstacles. | 0.432 | | | |
| | | $\alpha = 0.827$ | | |
| 23. I knew how to enable students to formulate their own learning outcomes/goals. | | 0.740 | | |
| 24. When students found it difficult to gain insight into the material to be studied, I knew ways to solve this. | | 0.695 | | |
| 21. I knew when each teaching technique I used would be most effective. | | 0.689 | | |
| 19. I adapted my teaching techniques to achieve expected the outcome. | | 0.687 | | |
| 22. I checked to what extent my students comprehended the topic while I was teaching. | | 0.647 | | |
| 20. I used different teaching techniques depending on the situation. | | 0.640 | | |
| | | | $\alpha = 0.804$ | |
| 14. I asked myself how well I have accomplished my goals once I had finished. | | | 0.797 | |
| 16. During my regular duties, I assessed and reassessed the situation while progressing towards my goals. | | | 0.731 | |
| 15. I organized my time to best accomplish my career goals. | | | 0.710 | |
| 13. I paced myself while I was working in order to have enough time. | | | 0.656 | |
| 8. I sought out feedback. | | | 0.498 | |
| 17. I reframed my work plans when the work requires coordination and cooperation with other intelligent | | | | |
| groups/team members. | | | 0.450 | |
| | | | | $\alpha = 0.823$ |
| 26. I was able to adapt my work habits to the 'new normal' due to the COVID-19 pandemic. | | | | 0.857 |
| 27. During the pandemic, when I analyzed the new aspects of the situation and reframed my goals, I found | | | | |
| new ways of being successful. | | | | 0.792 |
| 25. I focused on new challenges due to the COVID-19 pandemic in my academic environment. | | | | 0.698 |
| 28. During the pandemic, I made discoveries / learned new research or teaching methods. | | | | 0.683 |
| Eigen Value | 7.63 | 2.21 | 2.11 | 1.65 |
| % of Variance | 30.51 | 8.81 | 8.42 | 09'9 |
| Overall $\alpha = 0.900$; total variance explained is 54.36% | ed is 54.36% | | | |

Notes. Extraction method and Rotation method: Principal Components Analysis and Varimax with Kaiser normalization. Loadings larger than 0.4 have shown Table 3.6 - Rotated factor loadings and Cronbach's alpha value for each factor

3.4. Calculation of AE among university lecturers

Scores of the AE were computed by calculating the mean values for the responses of all the 25 items for each participant. The mean score of AE of the total sample was recorded as 4.04 ± 0.47 (Table 3.7).

| Mean | Median | Std. Deviation | Minimum | Maximum |
|------|------------------------------|---|---|---|
| 4.04 | 4.08 | 0.47 | 2.44 | 5.00 |
| 4.21 | 4.22 | 0.55 | 2.11 | 5.00 |
| 4.04 | 4.00 | 0.60 | 1.67 | 5.00 |
| 4.07 | 4.00 | 0.66 | 1.25 | 5.00 |
| 3.76 | 3.83 | 0.71 | 1.67 | 5.00 |
| | 4.04 4.21 4.04 4.07 | 4.04 4.08 4.21 4.22 4.04 4.00 4.07 4.00 | 4.04 4.08 0.47 4.21 4.22 0.55 4.04 4.00 0.60 4.07 4.00 0.66 | 4.04 4.08 0.47 2.44 4.21 4.22 0.55 2.11 4.04 4.00 0.60 1.67 4.07 4.00 0.66 1.25 |

Table 3.7 - Comparison of scores of AE and four dimensions of the total sample

4. DISCUSSION

AE can be simply stated as the successful adaptation to non-standard and novel conditions (Hatano & Inagaki, 1986). However, the awareness and exploration of AE are underrated. The COVID-19 pandemic has driven the globe into a place, where the routine lifestyle is difficult without adaptations. At present, futurists reiterate that the working environment will never be the same after the pandemic. Therefore, AE should be cultivated for survival in almost every field and spent a successful and productive lifestyle.

Although AE performs a significant task in education for both teachers and learners, the present study results revealed that the majority of the lecturers were not aware of the term, "Adaptive Expertise." Furthermore, several studies are available on AE among students, which of university lecturers is under-reported.

4.1. Dimensions of AE among university lecturers

The most recent literature encompasses about three dimensions (domain specific skills, innovative skills, and metacognitive skills) that influence AE among different professions (Bhole Carbonell et al., 2015). Some researchers have described several other dimensions which could lead the experts to be well adaptive, such as understanding, flexible action, and metacognition (Ward et al., 2018). Therefore, the identification of dimensions of AE requires further studies.

The results of the present study revealed that AE among university lecturers comprised of four dimensions; domain specific skills, innovative skills, metacognitive skills, and personality traits. Ward et al. (2018) speculated that personality traits could be a dimension of AE. It can be further strengthened by the research findings of Jayawardena (2020). She has identified a relationship between AE and academic positions, which can result from personality characteristics.

In our view, personality traits drive the internal characteristics to be adaptive. Initiating the process of adaptation, finding the best way of problem-solving, and staying engaged till the end of the process are driven by personal characteristics or traits. These traits are not identical

in every individual or profession. Furthermore, we suggest that personality traits encompass the other three dimensions as well (Figure 4.1).

Higher education is much focused on improving the domain knowledge and practical skills of undergraduates, and the personality traits are poorly addressed. That could be one among few reasons undergraduates are less creative and unable to identify the best. Higher education should pay much attention to building adaptive characteristics among undergraduates which will ultimately ensure the success of future uncertainties.

4.2. Level of AE among university lecturers

According to the calculations of the present study, the highest possible score that could be obtained for AE was five points. The mean score of the AE of the total sample showed a relatively higher value (4.04 ± 0.47) . Therefore, it can be postulated that university lecturers are possessed characteristics of AE in a significant manner. The study was carried out during a peak period of the COVID-19 pandemic in Sri Lanka, where it created an unexpected and non-standard situation. Therefore, the results of the level of AE can be emphasized for its reliability. The present results of the higher degree of AE among university lecturers were in line with the results of the previous research conducted by Jayawardena (2020). However, the response rates of Jayawardena (2020) and the present study were quite low. Therefore, it

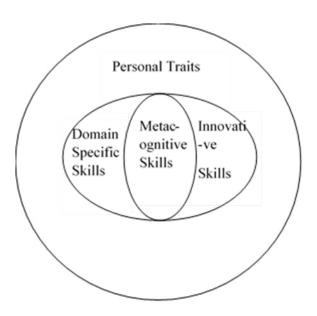


Figure 4. 1 - Conceptual framework of four dimensions of adaptive expertise among university lecturers

can be postulated that the lecturers who responded to the questionnaire might be enthusiastic and positive-minded. This might lead to a relatively higher value for the AE score. Therefore, it is difficult to predict the level of AE from this study alone.

5. Conclusion

The present study revealed that university lecturers were adaptive to a higher degree which was more contributed by the domain specific skills. The findings of this study suggest a fourth dimension which is personality traits. The level of personality traits with other dimensions revealed the lowest value among university lecturers. This may be because, university lecturers generally, work in a stable environment; therefore, their personality traits might be somewhat hidden and not arise. When arguing with the pandemic period, it can be stated that university lecturers may have already got adapted to the virtual environment and now they have become stable in that particular area. So, their personality traits might not be at a significant level now. In-detail exploration is needed for a definitive conclusion regarding the contribution of personality traits to AE.

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Long Term Social Impact of Covid-19 Pandemic on Teaching and Learning in Context of India

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Over the last decade, there has been a transformation in teaching and learning in different domain and COVID-19 has also brought a long term impact on the functioning of educational institutions. Even the New Education Policy (NEP)-2020 emphasizes upon transformational reforms in educational sector to provide quality education by adopting holistic approach towards education. The thrust on access to social services such as education is considered to be very critical to face this unprecedented situation arisen due to pandemic. The studies also indicate that the focus on digital mode of education and use of electronic devices has increased. The purpose of this paper is to study the transition to online teaching and learning and how various education institutions have adopted digital mode for dissemination of knowledge with no geographical boundaries. Using the secondary approach, the objective of the study is to identify the various opportunities available at national and international platforms of academic resources to fill the gap. These e-learning platforms supported in enhancing the skills and additional knowledge. The whole education system has transformed from the pedagogical tools and techniques adopted for teaching to the process of assessment mechanism. To keep pace with these changes, the various premiere Higher Education Institutions i.e. University or College that have adopted the online mode for offering new courses and blended mode of teaching for existing courses at various levels. The findings of the study also focused on the need to provision of high quality educational opportunity and investment in education infrastructure. The digital platforms have emerged as enablers and adoption of new and innovative technology have also brought changes in the teaching pedagogy and learning environment. The findings of the study reflect that there are inequalities in education and digital divide in terms of computer usage and utilizing the internet facility that also needs to be tackled. The study also concluded that the education models and structures have transformed and there is an urgent need to upgrade the digital knowledge and digital infrastructure for imparting education to the students. It is also recommended that the industry requirements must be considered by academia while adopting the curricula and disciplines while teaching the various courses. The COVID-19 pandemic demonstrated the importance of investing in digital infrastructure and strengthening the education system so as to reduce the long term impact on the learning curve of the learners.

Keywords: Social Sector, Education Models, Digital Infrastructure, Online Teaching, Online Learning resources

Introduction

India is a second largest populated country in the world with a high density and even the transmission potential of COVID-19 was very high. There has been adverse impact on the livelihood of people because of closure of economic activity and impact of lockdown in terms of social aspect could be widely seen in various sectors. There is a wide range of responses all over the world to contain the spread of Covid-19 and various measures are adopted like lockdowns but there have been wide variations in stringency of lockdown in various countries

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also. Though India has a young population with only 10% of the people above the 60 years of age which is also significantly higher than other countries. Given the diversity in India, the management of Covid-19 within states in India depends upon the population density, demographic aspect and certain other factors considered by policy makers. The present study focuses on the long term impact of Covid-19 on teaching and learning in context of India and policies and strategies adopted for limiting the spread of the pandemic that adversely impacted the education sector.

Far Sighted Response

The Higher Education Institutions are incorporating the skill component in the curriculum and aligning to the industry requirement. It results into enhancing the workforce productivity by creating a skill ecosystem for outcome based training and learning. Shri Vishwakarma Skill University has also taken a lead to enable pathways for learners by offering skill based programs that are mapped to employer demand and benchmarked to global standards. Such institutions are bridging the gap in their knowledge and creating employment opportunities by leveraging the strengths and capabilities. The industry integrated model has focused on delivering quality courses and providing skill development and on-the-job training, thus, promoting academic excellence for learners. The government and various apex institutions like UGC, ICSSR, DST have also come up with several new schemes and programs to facilitate the promotion of excellence in Higher Education and Research. To strengthen the economy and Higher Education Institutions and to reduce the impact of Covid-19, such initiatives are imperative to provide scientific training and skilling of the youth. The emerging challenges due to this unprecedented situation, can have long term social impact on teaching and learning may be addressed by integration of knowledge and technology. During this period of Covid-19, the policy planners have focused more on research, education and institution building by framing strategies and policies to enable the Higher Education Institutions to adopt such practices so as to enhance the teaching and learning experience.

Role Of Innovation and Technology

Faced with an unprecedented pandemic and the resultant uncertainty, there has been disruptions in supply chain not only at the local level but also at the global level. This in turn also has some long term social impact and various higher education institutions are adopting digital platforms and innovative technologies to enhance the learning experience. The ongoing Covid-19 pandemic has helped showcase the role of technology-enabled platforms along with digitization for disseminating the knowledge to learners. Empirical evidence and vast literature also suggest that there is great role of innovation and technological progress in growth and development as a whole. As per Global Innovation Index, India ranks 48th amongst 131 countries in terms of innovation performance and India has also entered the top 50 innovating countries for the first time in 2020. As per Economic Survey 2020-2021, India has significantly improved in HCR (Human Capital and Research Performance from rank 103 in 2015 to 60 in 2020 and this improvement is attributed to improvement in tertiary education sub-pillar.

Role Of National Education Policy(NEP)-2020

Over the next decades, the years that lie ahead will shape the destiny of the whole world and not just India through provision of high quality educational opportunities. The NEP (New Education Policy)-2020 is new and forward looking vision for India's Higher Education System

towards more holistic and multidisciplinary education. Even, there is a lots of transformation in the knowledge landscape around the world due to emerging technologies and advancement in the field of education and information technology. India has emerged as a global knowledge superpower because of the education system that has been rooted in the Indian ethos in ancient times in world class institutions like Takshila, Nalanda etc. and also produced great scholars. The long term social impact on teaching and learning crisis due to current situation can be dealt by revamping the curriculum and pedagogy. Thus, NEP-2020 focuses on developing the mechanism to deliver high-quality higher education, with equity and inclusion and also to increase the Gross Enrolment Ratio in higher education including vocational education from 26.3% (2018) to 50% by 2035. Thus, HEIs must adopt more holistic approach in an integrated manner focusing on application based having learners centric approach. There is need for skilled workforce, multidisciplinary learning, collaborative research to deal with the present situation having social impact on teaching and learning in different field of study.

Measures Taken By The Government

Faced with enormous uncertainty, the lockdown had an inevitable impact on various sectors, education system and on the economy as a whole. Focusing economic recovery, the Government has announced relief packages, development and welfare schemes that has enabled the country to endure the impact of Covid-19. The same is depicted below in the table:

| Item | 2014-2015 | 2015-2016 | 2016-2017 | 2017-2018 | 2018-2019 | 2019- 2020(RE) | 2020- 2021(BE) |
|--------------------------------|-----------|-----------|-----------|-----------|-----------|-------------------|-------------------|
| Total Budgetary Expenditure | 32.85 | 37.61 | 42.66 | 45.16 | 50.41 | 58.76 | 64.70 |
| Expenditure on Social Services | 7.68 | 9.16 | 10.41 | 11.40 | 12.78 | 15.31 | 17.16 |
| *Education | 3.54 | 3.92 | 4.35 | 4.83 | 5.26 | 6.13 | 6.75 |
| Expenditure on Social Services | 6.2 | 6.6 | 6.8 | 6.7 | 6.7 | 7.5 | 8.8 |
| *Education | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 3.0 | 3.5 |
| Expenditure on Social Services | 23.4 | 24.3 | 24.4 | 25.2 | 25.4 | 26.1 | 26.5 |
| *Education | 10.8 | 10.4 | 10.2 | 10.7 | 10.4 | 10.4 | 10.4 |
| *Education | 46.1 | 42.8 | 41.8 | 42.4 | 41.2 | 40.0 | 39.3 |

Table 1.1 TRENDS IN SOCIAL SERVICE SECTOR EXPENDITURE BY GENERAL GOVERNMENT (Combined Centre and State)

Source: Economic Survey 2020-2021

Expenditure on *'Education' pertains to expenditure on Education, Sports, Arts and Culture'. From Table 1.1, it is interpreted that Considering the importance of social sector, the Government has also increased the expenditure on social services (Education, health and other social sectors) by Centre and State combined together as a proportion of GDP increased from 6.2% to 8.8 % during the period 2014-2015 to 2020-2021 as per Economic Survey 2020-2021. In context of education sector, it has increased from 2.8% in 2014-2015 to 3.5 % in 2020-2021.

Looking Forward

Given the uncertainty of COVID-19, the new policy paves the way for transformational reforms in higher education systems in India by focusing on quality education and learning outcome with emphasize on the two T's- Teachers and Technology. To enhance India's economic growth, investment made in social infrastructure played an important role for improving socio-economic indicators and achieving Sustainability Development Goals (SDGs). The skill development sector helps in enhancing the employment opportunities and realizing selfreliance through Atma Nirbhar Bharat Rojgar Yojna. To address the challenges faced in this unprecedented situation, Higher Education Institutions and Skill Development Universities are playing a crucial role by adopting innovative measures for online/digital teaching. The global pandemic has caused radical changes in education and HEIs managed this transition by shifting to virtual teaching. Still, there is a need to invest in digital infrastructure and adopt best practices to strive for excellence in hybrid learning. To face new challenges and opportunities, reskilling and upgrading faculties are the need of the hour. Even the faculty members and students need to be prepared themselves for Industry 4.0 and the pandemic has caused significant disruptive challenges. During the pandemic, Ministry of Education, Government of India, UGC, AICTE and State Government has proved to be torch bearer for the HEIs for continuation of teaching and learning and issued relevant instructions. The various HEIs have also collaborated with various online education provider platforms at national and international level to enhance the learning experience by offering courses as per the latest demands in the industry. The academia has started courses through online or hybrid mode and also collaborated with other international universities to realize the collective vision of raising the quality and standard of teaching. The long term social impact of pandemic on education sector can be reduced by adopting multifaceted and multidisciplinary learning.

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Covid-19 Pandemic and Impact on Education: A Study on Higher Education

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Abstract

The outbreak of Covid-19 pandemic affected all sections of the society including the students in the education sector. The disruptions in the learning process forced students to shift towards online mode to ensure continuity of education. In order to analyse the impact of the online learning experience and the potential changes in the mode of learning, the present study is designed. The study is based on an online survey of 1125 students pursuing higher education in different educational institutions in India. The study focused on three core issues for investigation including- online learning performance, level of satisfaction in online learning and the preference of future learning mode. The initial results indicate a positive influence of online learning features, but the level of satisfaction as moderate. The principal component analysis (PCA) adopted in the study categorized the attributes of online learning into three main factors like: "reliability", "motivating" and "usability". While analyzing factors influencing the online mode of learning, the reliability factor was found to be the strongest predictor of deriving satisfaction among the sample group of students. However, the logistic regression results reveal that the "motivating" attribute of the online learning process stimulates students to prefer hybrid or blended mode over online and offline learning in future to ensure continuity of education. The findings of the study may create scope for educational institutions to devise mechanisms to impart education through a blended model in future to attract students towards learning. Online learning is an innovation and outcome of Covid-19 pandemic, the education sector may embrace the same to face disruptions and maintain growth.

Keywords: Education, Covid-19 Pandemic, Online learning, Blended learning

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Lifestyle Changes During COVID-19 Pandemic Among Medical and Physiotherapy Undergraduates in Faculty of Medicine, University of Colombo, Sri Lanka

Maddumage Dona Shanshika Pramodini¹, Arangala Withanage Sameera Madusanka² & Asha Hansika Wettasinghe³

Online education became the new normal for university students during the COVID-19 pandemic and this has led to several changes in their lifestyles.

Thus, the aim of this study was to identify lifestyle changes and physical activity levels during COVID-19 pandemic among undergraduate medical and physiotherapy students in the University of Colombo, Sri Lanka. A web-based survey, consisting of questions from lifestyle related behaviour questionnaire and a short form of the International Physical Activity Questionnaire (IPAQ) was used.

A total of 349 participants (age= 22.59±1.96, n =141;40.4 % males and n=208;59.6 % females, n=244;69.9% MBBS and n=105;30.1% B.Sc. Physiotherapy) completed the questionnaire. A significant increase in sitting and screen time during the COVID-19 pandemic was found in 68.5 % of participants. The mean sitting time and screen time were 7.50±5.21and 7.09±3.43 hours per day. Compared to the pre-pandemic period, 32.4 % and 41.5% agreed that their stress and anxiety levels and sleeping hours were increased while 34.4% reported an increase in daily intake of fruits and vegetables during the pandemic. According to the IPAQ categorical score 49.9% were physically inactive and the mean weekly total metabolic equivalent (MET) minutes of the population was 1018.20±1271.13.

An overall increase in physical inactivity such as reduced exercises, increased sitting and screen time compared to the pre-pandemic period was observed among study participants. Promotional educational strategies should include the development and implementation of interventions that promote active lifestyle behaviours to reduce sedentary behaviour during the COVID-19 pandemic.

Keywords: *Physical activity, COVID-19, lockdown, lifestyle, Sri Lanka, undergraduates Introduction*

COVID-19 pandemic, a global burden raised in 2020 caused a considerable public health burden worldwide. Not only the disease itself but also the social distancing measures established to minimize the transmission of the virus lead to several physical and psychological drawback among people at all ages. The significant impact that COVID-19 bought to the lifestyle of people at all ages is drastic. Among those who are affected physically as well as mentally, youth is a vulnerable population to change their lifestyles either towards a positive direction or towards a negative direction. As University students are already known as a risk group for sedentary behaviours [5] and even in the non-pandemic period as they were prone to unhealthy habits and dietary patterns, [6] this global pandemic could drag them down even to a greater risk of sedentary behavior. Furthermore, as medical students and physiotherapy students are more prone to have sedentary behaviours due to their tight academic schedules, assessing the physical activity levels and lifestyle among them are beneficial in many ways. As future health

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care professionals, they themselves should lead better life styles at this age and they can be role models to their patients in the future.

During the pandemic, as outdoor activities were limited, working from home and online classrooms became the new normal, leading to many difficulties in achieving the recommended levels of physical activity. It is reported that staying at home for prolonged periods of time might lead to sedentary behaviours such as spending more time on sitting activities like watching television and playing games which might lead to an increased risk of chronic health conditions. [1] Studies have shown that physical inactivity could lead to several non-communicable diseases such as coronary heart diseases, type 2 diabetes, breast cancer, and colon cancer thus shortening the life expectancy. [2] Recent evidence reported that there is a significant difference in physical activity levels and energy expenditure before and during COVID-19 pandemic. [1,3] Moreover it has been reported that during the COVID-19 pandemic the prevalence of overweight and obesity has been increased specially in the youth population. [4]

COVID-19 pandemic and social distancing measures affected not only the physical health but also the mental health as well. It is reported that people experience psychological stress, depression, anxiety and insomnia during the pandemic. ^[1] Therefore, the impact that COVID-19 bought to the disruptions of daily routines can be seen as an opportunity to implement new habits leading to the development of a more active lifestyle in the future. ^[7] Thus, the aim of this study was to assess the physical activity level, sedentary behaviour and changes in lifestyle related behaviour among undergraduate medical and physiotherapy students of Faculty of Medicine, University of Colombo, Sri Lanka.

Methods

A descriptive cross-sectional study was carried out among medical and physiotherapy undergraduates of Faculty of Medicine, University of Colombo, Sri Lanka. Participants who fulfilled the inclusion criteria were selected according to convenient sampling. We recruited all the medical and physiotherapy undergraduates who gave the informed consent at Faculty of Medicine, University of Colombo, Sri Lanka. Undergraduates who were affected by COVID-19 during the data collection period, students who did not use social networking sites such as Facebook, WhatsApp, Twitter, Instagram or a personal email address, those who did not have a smartphone, laptop or tablet to access the E- survey were excluded from the study.

Changes in lifestyle related behaviour was assessed by the lifestyle related behaviour questionnaire which is a valid and reliable tool. ^[11] The questionnaire consists of questions related to changes in dietary habits, sedentary behaviour, and quality of sleep and anxiety and stress levels. It has been reported that this tool will help to provide valuable inputs to the public health policy makers in a short period of time which is important specially in pandemic situations.^[11]

Physical activity level was identified by the short form of International physical activity questionnaire (IPAQ-SF) which is a validated tool ^[8,9] to measure the physical activity level. According to IPAQ-SF, physical activity was classified into four categories as vigorous activity, moderate activity, walking and sitting. For each of the above physical activity category, the total number of metabolic equivalent (MET) minutes for a week was calculated. Estimation of the MET minutes for each activity level was done according to the recommendations of the American College of Sports Medicine (ACSM). Therefore, the considered values were, sitting

- 1.5 MET, walking - 3.3 MET, moderate activity - 4.0 MET and vigorous activity - 8.0 MET. [10] Only vigorous, moderate physical activities and walking were considered for the total MET-minutes per week calculation.

English version of both questionnaires were used to avoid any errors in translating into local languages, assuming that all participants were comfortable in answering in English, as the medium of teaching of both the MBBS degree programs and B.Sc. (Honors) in Physiotherapy degree program is English. After obtaining the approval from the Ethics review committee and the Dean of Faculty of Medicine, University of Colombo, a self-reported questionnaire was distributed among participants as a Google form along with the information sheet and the consent form via an e-link. The questionnaire was contained of 3 sections. First section composed of demographic related questions including age, gender height, weight, family type and residence. Other two sections of the survey were consisted of questionnaires to assess the physical activity level and changes in lifestyle related behaviour. A time period of one month was given for participants to respond and reminders were sent weekly. Access to the survey was denied after the given time frame. Statistical analysis was performed using the SPSS version 25.0.

Results

A total of 349 participants (40.4% males; 59.6% females) responded to the E – survey. The mean age of the sample was 22.59 ± 1.96 years. There were no missing data. The mean BMI of the participants was 22.33 ± 9.80 kg/m² with the prevalence of overweight and obesity being 15.2% and 12.0 % respectively. Socio-demographic characteristics of the study participants are shown in table 1.

| Socio-demographic characteristics | Value |
|-----------------------------------|--------------|
| Age | 22.59(±1.96) |
| Gender | |
| Male n (%) | 141(40.4 %) |
| Female n (%) | 208(59.6%) |
| Degree programme | |
| MBBS n (%) | 244 (69.9%) |
| B.Sc. (Hons) Physiotherapy n (%) | 105 (30.1%) |
| Permanent residence | |
| Urban n (%) | 215(61.6%) |
| Non-urban n (%) | 134(38.4%) |
| Family status | |
| Nuclear family n (%) | 285(81.7%) |
| Extended family n (%) | 53(15.2%) |
| Joint family n (%) | 11(3.2%) |
| Mean BMI (kg/m2) | 22.33(±9.80) |
| BMI Category | |
| Underweight | 57(16.3%) |
| Normal | 197(56.4%) |
| Overweight | 53(15.2%) |
| Obese | 42(12.0%) |

Table 1: Socio-demographic characteristics of the study participants

Values are presented as mean ± standard deviation or number (frequency%)

According to the IPAQ-SF categorical score, majority of participants were inactive (n=174; 49.9%) while 41.5% (n=145) were moderately active and 8.9% (n=30) were highly active. The mean weekly total MET minutes of the study sample was 1018.20 ± 1271.13 . Male participants had significantly higher total MET-minutes/week compared to female participants (p=) determined by the independent sample t test. Physical activity levels and sedentary behavior of each gender are reported in table 2.

| | Male | Female | Total | P value |
|------------------------------------|-----------------|----------------|-----------------|---------|
| | Mean+SD | Mean+SD | Mean+SD | |
| Physical activity level | | | | |
| Vigorous PA (MET-minutes/week) | 602.55±934.03 | 329.42±546.09 | 439.77±739.17 | <0.001* |
| Moderate PA (MET- minutes/week) | 322.13±546.87 | 198.17±355.22 | 248.25±446.18 | >0.001 |
| Walking (MET-minutes/week) | 382.75±768.19 | 294.54±563.33 | 330.18±654.25 | >0.001 |
| Total MET-minutes per week | 1307.43±1480.54 | 822.14±1066.89 | 1018.20±1271.13 | <0.001* |
| Sedentary behaviour | | | | |
| Sitting time (minutes per day) | 7.80±6.06 | 7.30±4.55 | 7.50±5.21 | >0.001 |
| Screen time (hours per day) | 7.08±3.28 | 7.10±3.54 | 7.09±3.43 | >0.001 |
| Sleeping time (hours per day) | 6.98±1.50 | 7.47±3.64 | 7.27±2.97 | >0.001 |
| | | | | |

Table 2: Physical activity levels and sedentary behavior according to the gender *Significance < 0.001 determined by independent sample t test

Lifestyle related behavior of the study participants during the COVID -19 pandemic is shown in table 3. Majority of the participants (68.5%) agreed to the response that, their sitting and screen time has been significantly increased during the pandemic and a slight increase in stress and anxiety levels and sleeping hours were reported by 32.4 % and 41.5% of participants respectively while 31.5 % reported a slight decrease in consumption of junk food and 34.4% reported a slight increase of daily intake of fruits and vegetables.

| Probability of skipping one of the main meals (breakfast/lunch/dinner) | Question | Significantly increased n(%) | Slightly increased n(%) | Gross Similar n(%) | Slightly decreased n(%) | Significantly decreased n(%) |
|--|---|------------------------------|-------------------------|--------------------------|-------------------------------|------------------------------------|
| Habit of snacking between meals (18.6) (37.0%) (26.9%) (10.0%) (7.4) (27.4%) (20.0%) (10.0%) (7.4) (20.0%) (10.0%) (7.4) (20.0%) (10.0%) (7.4) (20.0%) (10.0%) (7.4) (10.0%) (14.6%) (7.2%) (7.2%) (20.0%) (10.2%) (11.1%) (10.2%) (11.1%) (10.2%) (11.1%) (10.2%) (11.1%) (10.2%) (11.1%) (11.1%) (10.0%) (10 | | | | | | |
| Quantity/portions of meals and snacks (6.3%) (31.5%) (40.4%) (14.6%) (7.2%) Daily intake of fruits and vegetables 67 120 111 43 8 Intake of a balanced diet (including healthy ingredients such as whole wheat, pulses, legumes, eggs, nuts, fruits and vegetables) (17.5%) 26.4%) (40.7%) (13.5%) (2.0%) Consumption of junk food/fast food and fried food (4.9%) (16.9%) (15.5%) (31.5%) (31.5%) (31.5%) (31.5%) (31.5%) (31.5%) (31.5%) (31.5%) (20.0%) (20.0%) (31.5%) (31.5%) (31.5%) (31.5%) (20.0%) (31.5%) | Habit of snacking between meals | | | | | |
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| Support of family and friends in eating healthy 71 (20.3%) 149 (42.7%) 111 12 6 (31.8%) 6 (3.4%) (1.7%) Interest in learning healthy eating tips from the media (Newspaper articles/magazines blogs/videos/TV shows/text messages) 46 (13.2%) 138 (39.5%) 152 9 4 (43.6%) 4 (2.6%) (1.1%) Participation in aerobic exercise 40 88 (10.8 63 50 (25.2%)) 50 (11.5%) (25.2%) (30.9%) (18.1%) (14.3%) Participation in leisure and household chores 56 159 90 33 11 (25.8%) 9.5%) (3.2%) Sitting and screen time 239 84 13 8 5 (25.8%) (9.5%) (3.2%) Hours of sleep 91 145 81 21 11 (26.1%) 21 11 (26.1%) 11 (26.1%) (41.5%) (23.2%) (6.0%) (3.2%) Quality of sleep 73 98 110 57 11 (20.9%) (28.1%) (31.5%) (16.3%) (3.2%) Stress and anxiety levels 52 113 90 60 34 | | | - | | | |
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| Quality of sleep (20.9%) (28.1%) (31.5%) (16.3%) (3.2%) Stress and anxiety levels 52 113 90 60 34 | Hours of sleep | _ | | | | |
| Stress and anxiety levels | Quality of sleep | | | | | |
| $(14.9\%) \qquad (32.4\%) \qquad (25.8\%) \qquad (17.2\%) \qquad (9.7\%)$ | Stress and anxiety levels | _ | 113 (32.4%) | | | |

Table 3: Lifestyle related behavior of the study participants during the COVID -19 pandemic.

Discussion

This study aimed to assess the level of physical activity (PA) and changes in lifestyle related behaviour during COVID-19 pandemic. Results revealed that the majority (49.9%) of participants were physically inactive. These findings are in line with other studies which showed significantly decreased PA levels among undergraduates during lockdown. A study done in undergraduates of southern Italy reported that more than 62% of participants were not sufficiently physically active. Most studies have reported that physical activity levels of undergraduates have significantly decreased during the COVID-19 lockdown compared to the pre lockdown period. A recent systematic review also reported that physical activity levels have significantly reduced during COVID-19 lockdown with concurrent increases in sedentary behaviour.

The population had a mean total MET-minutes/week of 1018.20 ±1271.13. A study done in physiotherapy undergraduates of Sri Lanka, before the COVID-19 pandemic has reported a mean total MET-minutes/week of 1791.25±3097, reporting that majority were inactive.^[13] This finding emphasizes that university students were a risk group for physical inactivity even in the non-pandemic period.

We found a gender difference in physical activity levels during the lockdown. Male participants had significantly higher PA levels compared to female participants. This finding could be due to different motivations, interests and environmental influences. A previous study reported that there are some factors that motivated men to engage in PA, but not women such as competition or social recognition while weight control was the main motivation for women.^[14]

In agreement with many studies the present study also revealed a significantly increased sedentary behaviour including a mean screen time of 7.09±3.43 hours per day, a mean sitting time of 7.50±5.21 hours per day and a mean sleeping time of 7.27±2.97 hours per day. According to the results from lifestyle related behaviours questionnaire, 68.5% of participants reported that screen and sitting time were significantly increased during the COVID-19 lockdown. This increased screen time might be due to the fact that most teaching and learning activities during lockdown were delivered online and also home confinement could lead to increased use of social media. A slight increase in sleeping hours were reported by 41.5% of the participants. A study done in Italy reported that the usage of digital media near bed time was increased during COVID-19 lockdown. In addition to that, marked changes of sleep wake rhythms were observed with people going to bed and waking up later thus spending more time in bed [15] leading to increased sedentary behaviours.

Limitations

Physical activity level was only assessed subjectively using the IPAQ (short form) and no objective measures were included. However, this method is subject to recall bias which could lead to overestimation of the physical activity levels which is one of the main limitations of the study.

Conclusions

The main findings highlight the immediate need of strategies and policies to promote indoor physical activities and active lifestyle behaviours among undergraduate medical and

physiotherapy students especially during a pandemic like COVID-19. It would be beneficial in future in managing secondary complications associated with physical inactivity and sedentary lifestyle.

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Lifestyle Among General Population During COVID-19 Lockdown In Nepal

Marina Vaidya Shrestha¹, Sunil Babu Shrestha² & Sunil Kumar Joshi³

The government of Nepal declared 'Lockdown' from March 24 to July 21, 2020 due to the first wave of Covid-19 pandemic. During the lockdown, there was a restriction in movement and people worked from home. Such changes in lifestyles have caused switches in people's behaviours. Thus, this study aims to determine changes in lifestyle behaviour including physical activity, nutritional status and sleep habits during the lockdown among a representative sample of the general population of Nepal.

A cross-sectional study was conducted from August to October 2021 among the general population residing in Nepal. Ethical approval was obtained from the Institutional Review Committee of Kathmandu Medical College Reg. No 2107202104 to conduct this study and consent obtained from all respondents. The sample size calculated was 295. A convenient sampling method was used. A questionnaire was adapted from validated tools like questionnaires on International physical activity, nutrition, and sleep quality assessment. A pre-test was conducted among 10% of the sample size (29). Google form was used for data collection and data entered in Excel, exported to SPSS and coded for analysis.

124(42%) participants performed moderate level while 90(30.5%) performed low level of physical activity. Over 37.3% reported snacking which led to weight gain in around 61.8%. There was significant positive correlation between sleep quality and sleep duration (R=0.261; P<0.001), sleep latency(R=0.362; P<0.001), sleeping medications(R=0.174; P<0.003) and daytime dysfunction(R=0.308; P<0.001).

Lifestyle behaviours were affected during the lockdown period. The findings of this study provide the opportunity for general people to be aware of unhealthy behaviour and correct timing. On the other hand, it also suggests government authorities and policymakers to take some policy intervention and motivational actions so the general population will adopt healthy lifestyles during such future lockdown.

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Overcoming the Impact of Covid-19 Pandemic on Community Based Blood Collections at a Tertiary Care Hospital Based Blood Service

T I Withanawasam¹ & W A S Fernando²

Abstract

The onset of Covid-19 pandemic affected the Healthcare systems immensely. One major branch of healthcare facilities affected was Blood Collection, a community based service. The Donor Department of University Hospital of KDU (UHKDU) commenced in January 2020. WHO declared the Covid-19 pandemic in March 2020. UHKDU faced a major challenge in fulfilling the demand for blood amidst social distancing, travel restrictions and government imposed quarantine curfew.

The challenges faced by UHKDU during the period was being a new establishment, reduced blood stocks, cancellation of mobile blood collection campaigns, limited In-house donations. To overcome these challenges In-house donations were promoted over mobile campaigns to ensure donor safety. Contacting previous donors, publicity through social media, posting banners and notices in the hospital premises, announcements and introducing on-line appointments were carried out to maintain a steady blood supply.

The success of the methods implemented was observed by inquiring the in-house donors randomly, on what prompted them to visit the UHKDU facility to donate blood over six-month period. Out of 188 donors, 34% donors responded after seeing posters/banners in the hospital premises, making it the most successful method. 29% of donors responded to announcement made at the hospital premises. Regular blood donors presented at 19% and 8% donors made online appointments.

The pandemic had a lasting impact on blood donations which depended mostly on community based mobile campaigns. The interventions implemented reversed the impeding effect. Much safer in-house donations were promoted to meet the blood demand. The mobile campaigns resumed when the pandemic was controlled. Promoting In-house donation through publicity tools such as posters and announcements proved to be efficient in ensure blood availability in a pandemic situation.

Keywords: Covid 19, Blood Donation, Mobile Campaigns, In-house Donations

I. Introduction

Blood service in a hospital set up play a major role in patient management to provide an undisturbed supply of blood and components to manage the patients. Sri Lanka solely depends on voluntary blood donors.

According to the World Health Organization, 118.5 million units of blood are collected globally. Voluntary, unpaid, regular donors are the main source of blood which is safe and has less risk of transfusion transmitted infections (TTI).

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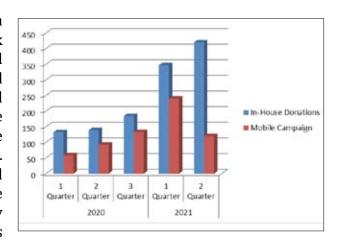
University Hospital of Kotelawala Defence University (UHKDU) in Sri Lanka, is a new establishment which commenced functioning on 2018. With the initiation of major departments such as medical, surgical, obstetric and paediatric units, the blood bank of UHKDU was established. The Donor department of the blood bank of UHKDU commenced in January 2020 with the main aim of facilitating the blood collection to satisfy the demand and hence a better patient care.

The global pandemic, Covid-19 was declared by WHO in March 2020. This resulted in strict government imposed curfew, practice of social distancing and cancellation of public gathering. This led to the cancellation of mobile blood donation campaigns which contributed to the majority of the blood stock at the National Blood Transfusion Service (NBTS). The new Donor Department of UHKDU was also affected by the outcome of the pandemic control measures taken by the authorities.

The hospital functions were carried out as normal and the blood demand did not change. The blood collection had to be increased to fulfil the demand. As a new establishment UHKDU faced a huge challenge in accomplishing this. Hence variety of strategies were implemented to attract donors such as displaying posters, making hospital announcements and publicity through social media. The aim of the study was to evaluate the successfulness of the implemented methods and assess the improvement of blood collection during the pandemic. The most successful methods out of the implemented strategies will be continued to use in the future to maintain a steady collection of blood.

II. Methodology and Experimental Design

This study was an observational study on the statistics maintained by the blood bank UHKDU. Each whole blood donation received from blood donors at UHKDU is recorded in a dedicated software named, Blood Bank Management System (BBMS). All the successful donations received during the study period was used for the analysis of data. The deferred donor statistics were excluded from the study. In-house donations and Mobile campaign donations were counted separately to understand the impact of the new norms imposed by the health ministry of Sri lanka



To assess the success of the methods used to increase the public awareness, random donors who presented for donations were asked what prompted them to visit UHKDU during the pandemic period. Their responses were noted down during donor councelling. The responses were categorized as follows;

- responses to displayed posters and banners
- responses to announcements at the hospital premises
- responses to awareness created by staff members
- Online appointment through NBTS
- responses to awareness through Social media
- regular donors

The data obtained were analyzed using Micrsoft Excel spreadsheets. Our figures were compared with the NBTS Statistics on Colombo cluster, using the Annual Reports 2019,2020 by NBTS.

III. Results

Demographic data are presented in figure.1 showing male and female donor contribution to the UHKDU blood supply during the study period

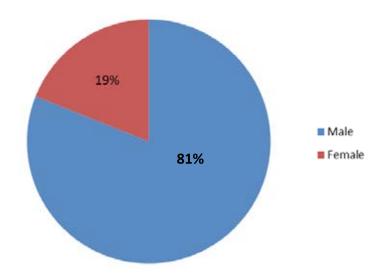


Fig.1 Percentage of male and female donors attended during the study period

Figure 2 shows the donations received during the period of January 2020 to August 2021 arranged in a quarterly manner

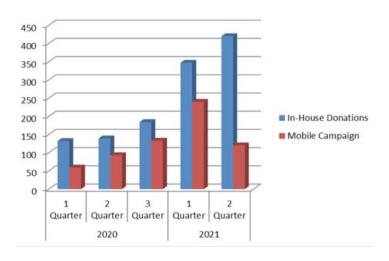


Fig 2. Donations received during the study period grouped in to quarters of each year

The in-house donations and mobile donation campaign distribution was obtained by studying the data relevant to each month during the study period from January 2020 to August 2021.

The whole blood unit donations received during the study period from January 2020 to August 2021 is shown in figure 3. The number of successful donations received was 1867.

in-house donations contributed to this was 1222 (65.4%) and mobile donation count was 645 (34.5%).

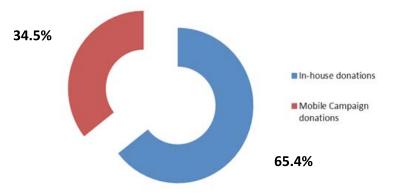


Fig.3: In-house donations vs. mobile donations

The strategies used to attract donors were assessed and presented in Fig.4. Hundred and eighty eight random donors were asked about what prompted them to visit UH-KDU blood bank. According to donor responses on what complelled them to visit UH-KDU blood bank was 34% from seeing banners and posters, 29% responded to announcements made at the hospital, 19% were regular voluntary donors, 8% made online appointments at the NBTS.

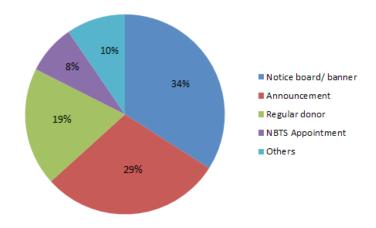


Fig. 4 Strategies implemented to improve donations and the responses from donors to them

The figure 5 shows the variation in total number of donations received by UHKDU in each month and the mark of 3 waves of Covid-19 pandemic during the study period.

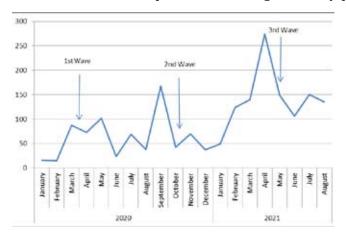


Fig.5 Effect of Covid-19 on blood collection with the 3 waves of the pandemic.

According to the line graph, declines in blood collections can be seen in April 2020, October 2020 and May 2021 which coincide with the onset of first, second and third waves of the pandemic.

IV. Discussion

Covid-19 Pandemic also known as SARS CoV 2 infection is an ongoing global pandemic resulting in a severe acute respiratory syndrome. It is marked as one of the deadliest pandemics in modern history. The rapid transmission and the mortality of the disease drove the WHO to declare a 'Public Health Emergency of International Concern' (PHEIC) followed by a Pandemic by March 2020 (WHO.org).

The Covid-19 pandemic triggered severe health, social and economic disruption globally, resulted by the infection itself, the preventive measures imposed by the governments and the public distresses. One of the major branches affected in Public health services is the Blood Transfusion Service. The transfusion services are solely responsible for receiving and handling blood, received through donations from the community, which play a major role in healthcare facilities as a therapeutic substance. There are internationally different identified modes of blood collections; voluntary non-renumeratewd blood donors, replacement donors and paid donors. National Blood Transfusion Service (NBTS), Sri Lanka, solely fulfils the demand through voluntary non-renumerated, regular blood donors which is identified as the safest mode by WHO. 100% of the collected blood is processed in to several blood components to be used effectively and efficiently for patients.

University Hospital of Kotelawala Defence University (UHKDU) is a new dedicated teaching hospital located in the Colombo south suburbs. UHKDU started functioning in December 2017, expanded its service with inward admissions, theatre and intensive care facilities. The blood bank of UHKDU commenced as an amalmagated service with NBTS in 2018. The donor department of UHKDU commenced in January 2020 with the aim of fulfilling the demand for blood. Mobile donation campaigns were planned to carry out in the following months, as mobile donation campaigns attracts the most number of voluntary donors. Meanwhile inhouse donations were carried out.

With the outbreak of Covid-19 pandemic, strict government restrictions were imposed to completely stop public gatherings and maintain social distance to prevent transmission of the disease. These measurements had a great impact on the NBTS Sri Lanka. UHKDU blood bank was also affected by this. The National Blood Transfusion Service alerted its centers about the impeding situation, resulting in depletion of blood stocks. This posed a great threat to hospital functions, such as emergency surgeries and handling accidents and emergencies. The 2020 total annual blood collection showed a 24.5% drop compared to 2019 statistics in Colombo region, which was the most affected, by the pandemic. Published data by Hakami et al. 2022, Kandasamy et al. 2022, Ogar et al. 2021 have shown that blood centres of Saudi Arabia, India and Nigeria recorded decrease in blood collections with the onset of Covid-19 pandemic.

The NBTS suggested following various strategies to attract donors and improve in-house donations, which was a less prominent method in collecting blood donations in Sri Lanka. Spreading awareness about blood shortage and the importance through social media, using television and other media outlets to gain publicity, introducing online appointment scheme and involving the tri-forces in the blood donations were some of the methods used by NBTS to

improve the donations during this dire situation. And hospital based blood centers attached to NBTS were also instructed to carry out their own methods to improve the blood collections. Thus UHKDU carried out their own plan of actions to achieve satisfactory collection.

UHKDU data analysis showed a clear variation in the mobile campaign donation statistics and in-house donation statistics as shown in figure 4. According to the annual reports published by NBTS, there is a clear pattern of mobile campaign donation statistics dominating over in-house donation statistics in the past. According 2019 Colombo cluster statistics, 90% contribution was from mobile donation campaigns and 10% were from in-house donations (Annual Report 2019, NBTS). Being a new establishment, the UHKDU blood bank decided on a policy of encouraging and promoting walk-in donors. This measure ensured the safety of the donors, while maintaining adequate stocks. In addition, blood collection from in-house donors are more economical.

Notwithstanding the 24.5% drop in total annual blood collection in 2020, the mobile collections in Colombo region were still dominant in numbers. The analysis on the data of this study however show that the donations received from mobile campaigns are decreased than the in-house donations at UHKDU. The identified reason can be that UHKDU blood bank targeted in-house donations from the start. Furthermore being a new establishment and cancellations of mobile donation campaigns which were planned, contributed to this observation.

UHKDU blood demand was high as the facility assisted the government by opening 3 additional intensive care units to treat all-island Covid-19 patients. With the understanding of the arising problem of depleting blood stocks and persisting demand for blood, the public awareness was raised using several methods to keep up the blood donations from voluntary donors through in-house donations. The first step was to promote in-house donations as a relatively safe mode of donating blood without contacting many people as in a mobile blood donation campaign. The NBTS introduced the online appointment facility for voluntary donors who can check up on the NBTS website and locate the closest blood donating center and make an appointment prior to visiting the facility. This helped ensure the safety of the donors by several folds.

The public awareness was raised to promote donors to visit donation facilities and donate blood. To gain the attention of the hospital visitors, banners and posters were displayed. Announcements were made at the hospital and flyers carrying information about donations were distributed. Word was spread through hospital and blood bank staff members. According to Fig.4, the displaying of banners and posters around the UHKDU premises yielded the best results. The banners and posters were displayed daily around strategical positions in the hospital where many visitors would pass by or wait. The LED screen at the entrance of the hospital displayed the notices about blood donations. The second most successful method was making announcements at UHKDU during rush hours when most of the visitors would be around the premises. 19% of donations collected from voluntary regular donors who chose to visit UHKDU when they were able to pay a visit. The introduced online appointment method by NBTS also had played a role in recruiting voluntary donors while maintaining the donor safety.

According to figures 2 and 3, the donations were mostly collected through in-house donations. During the first quarter of 2020, the donations were low due to being a new establishment and the declaration of the global pandemic in March. Sri Lankan pandemic situation was stabilized

after June 2020 when travel restrictions were lifted after the first wave of Covid-19 pandemic. As shown in figure 5 the blood collection at UHKDU was increased significantly with the ability to organize mobile donation campaigns and the public being at ease with visiting hospitals. These observations are comparable with the national level data according to NBTS statistics (Annual Report 2020). During this period attempts were made to contact previous donors with the contact information they have provided. This helped to communicate with previous donors and alert them, ensure their safety while making in-house donations. This stability lasted until October 2020 when the second wave of the pandemic hit the country causing the donation statistics to plummet especially as mobile donation campaigns were again halted.

The strategies which were used to draw voluntary donors were continued during this period of second wave which helped to maintain and increase the blood donations through in-house donations.. The figures 2 and 5 show that the donations received were maintained to a certain extent.

The online appointment scheme introduced by NBTS was used during this period. This helped voluntary regular donors to check the closest blood donating centre to their home, make an appointment, visit the facility on the given time and donate blood. Making announcements at the hospital premises about blood shortage and blood donations were done daily which boosted in-house donations after December 2020 as shown in figures 4 and 5.

By the end of March 2021, the Covid-19 cases subsided and mobile donation campaigns were successfully resumed. This coincides with the vaccination program which started in January 2021. This explains the spike in donations in April 2021 as shown in figure 5. The posters/banners, hospital announcements and spreading the awareness through staff members continued throughout this period which also contributed to improvement. After April 2021 the 3rd wave of Covid-19 started and a decrease in blood was observed again. Mobile campaign organizers were reluctant to gather people with the situation. The same strategies were continued to collect donors and maintain a steady supply of blood.

The study data show that with the on-going pandemic has an impact on blood collections at UHKDU blood bank blood bank which were comparable with national data. There would have been a long term impact that would extend further if timely interventions were not made.

V. Conclusion

The Covid-19 pandemic affected the National Transfusion Service including the UHKDU blood bank. The UHKDU blood bank was a new establishment which commenced 2 months prior to declaration of a global pandemic. As a new establishment which commenced with many future endeavours UHKDU was at a risk of blood component shortage which might have lasted months. To over come this dilemma various publicity strategies were deployed to attract voluntary donors to make In-house donations which, in the past was shadowed by the mobile donation campaign collection method. The strategies used were proved to be effective which can suggest that continuation of publicity strategies and promoting in-house blood donations to withstand situations like this global pandemic in future. Further we conclude that in-house donations or walk-in donors is the method of choice a blood transfusion service should target on.

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Health Care Economics Associated with Covid19 Patients in a Tertiary Care Hospital

Prudence A Rodrigues¹, R Hemalatha & S Lavanya

Background:

COVID-19 (coronavirus disease 2019) is a respiratory tract infection due to a novel coronavirus, SARS-CoV-2; global pandemic is ongoing. The infection caused by severe acute respiratory syndrome coronavirus-2, or COVID-19, can result in myocardial injury, heart failure, and arrhythmias.COVID-19 was first reported to the World Health Organization (WHO) from Wuhan, China, in December 2019, COVID-19 was first identified in Singapore on 23rd January 2020 who has travelled from Wuhan, China. On 7th April 2020, the Singapore Government further announced a circuit breaker, which was essentially a lockdown period aimed at minimizing movements and interactions to limit the spread of COVID-19 in the community. The spread of COVID-19 has placed healthcare systems under immense pressure and imposed a considerable financialhealthcare burden globally and in Singapore. In addition to the direct costs associated with the healthcare resource utilization in COVID-19 patients and the hospitals needs to respond with enhanced infection control measures such as screening, testing and personal protective equipment (PPE) which incurs a reduction inward capacity and added resources to emergency department particularly working on patient isolation facilities and intensive care units (ICUs).

COVID-19 was originated in China around 12.2% of many countries immediately lost access to vital goods and they implemented a mandatory quarantine. Many countries heavily relied on China for their societal needs and this dependence was exposed by COVID-19. Unfortunately, some of these lost vital goods included extremely important items to combat the virus, such as facemasks, respirators, medicines and other various raw materials. As a result, the lack of a PPEsituation in certain countries propagated the viral spread and only exacerbated in the pandemic situation. From a global economic standpoint, the World Bank projects that global growth was projected to shrink almost 8% with poorer countries feeling most of the impact, and the United Nations will cost the global economy around 2 trillion dollars during this year. COVID-19 has affected all countries in multiple ways, which can be viewed from human costs, economic costs, social costs and several other perspectives irrespectively.

Due to COVID-19 in a tertiary care hospital in India COVID 19 crisis has raised serious questions on many issues that are strategic and have global significance. They include economic, industrial, and political governance of the world order that has emerged in the post-1980s due to the globalization of economies worldwide.

COVID-19 has affected most of the economic sectors of the world. Local and global aviation, tourism, transport, agriculture, cultural industry, manufacturing, etc. have been at the front of the lines of those hard hits and are straggling. According to the Asian Development Bank, the cost of COVID-19 may increase trade costs. The aim of the study was to assess the direct expenditures incurred in the prevention or management of COVID-19 number of bed days and changes in hospital services.

Materials and Methods

A retrospective cost analysis was conducted from January to December 2020 in the tertiary care hospital in Coimbatore, India. The 1400-bed tertiary care hospital, which provides a extensive range of medical services including cardiology and oncological services. Costs were estimated from the multi-specialty hospital perspective.

The number of hospital visitors was restricted. Temperature screening areas and questionnaires were set-up at all hospital entrances to determine the visitors' travel history, contact history and presence of acute respiratory symptoms (ARI). Separately 'fever clinics' were set up at the COVID ward, so that high-risk patients presenting with fever, respiratory symptoms, or epidemiologic risk factors and tested for COVID-19 using oropharyngeal swabs for SARS-CoV-2 PCR.Inpatients presenting with ARI and high COVID-19 risk were admitted to isolation wards, while those with ARI and low COVID-19 risk were placed in the general wards. An infection control bundle, comprising infrastructural enhancements, improved PPE, environmental surveillance, patient surveillance and social distancing was implemented in ARI wards. As part of the pandemic preparedness response, the hospital additionally set up a new isolation facility to ensure that the hospital had reserve capacity to respond to a community outburst.

Direct expenditure associated with the management or prevention of COVID-19 from January 2020 to December 2020, including costs expended for the support of community COVID-19 operations, was obtained from the hospital's finance department. These costs were classified as: capital assets and facilities set-up for the prevention or management of COVID-19, labor-related costs, patient-care-related materials and supplies, and non-patient-care materials, related to the prevention or management of COVID-19, and costs associated with services for external facilities. Data were identified from the hospital's electronic database and details collected were length of inpatient stay and length of stay in the ICU, number of COVID-19 tests done, and discharge status. The weekly data pertaining to number of outpatient visits, non-emergency surgeries, inpatient days, and emergency department visits for 2020 were extracted from the hospital's database.

Cost analysis includes infection should be suspected based on presentation with a clinically compatible history (e.g., fever, upper or lower respiratory tract symptoms); alterations in senses of smell and taste are particularly suggestive, chest imaging in symptomatic patients almost always shows abnormal findings, usually including bilateral infiltrates; laboratory findings are variable but typically include lymphopenia and elevated lactate dehydrogenase and transaminase levels, Diagnosis is confirmed by detection of viral RNA on polymerase chain reaction test of upper or lower respiratory tract specimens; antigen testing is also available and has near-equivalent specificity but is slightly less sensitive and treatments and treatment strategies. All statistical analyses were performed using SPSS software. The descriptive statistics used to summarize the hospitalization characteristics and costs. Frequency and percentages were reported for categorical variables. Mean (95% confidence intervals (CIs)) or median (first quartile – third quartile) were reported for continuous variables.

Results:

Out of the 1, 38,000 inpatients tested for COVID-19 in 2020. The total inpatient- and ICU-days for COVID-19 patients in 2020 were 52,000 and 8 days respectively. A decline in all hospital services were observed from February following a raised disease outbreak alert level; most

services quickly resumed when the lockdown was lifted in June. Facilities set-up and purchase of capital assets in response to the pandemic was 65, 00, 00,000 and accounted for 35.09 % of the in-hospital expenditure. Patient-care-related supplies and services were 65,00,00,000 and accounted for 35.09% of the in-hospital expenditure. The largest single item category of expenditure incurred was medical supplies at 21, 63, 20,000, which accounted for 11.63% of all in-hospital expenditure. Table 1.

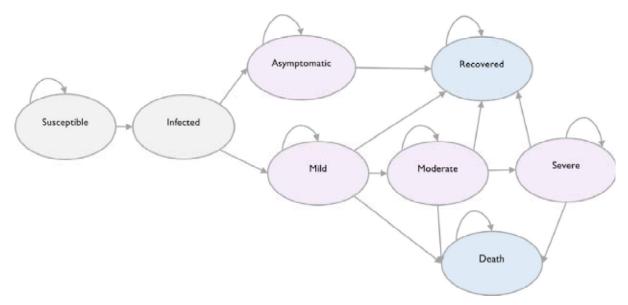


Figure 1- shows the Markov model diagram. Structure of the model of COVID-19 infection and progression. Patients progressed through a modified "SIR" process (Susceptible – Infected – Recovered).

| A | ge | Gender | | | | | |
|------------|--------|-------------|--------|--|---------------------|--|--|
| >40years | 36,845 | Male 29,658 | | | 45 Male 29,6 | | |
| < 40 years | 15,155 | Female | 22,342 | | | | |

Table-1 show the age and Gender

Patients admitted in hospital >40 years were 36,845 and <40 years 15,155 among theses population male patients was 29,658 and female patients was 22,342.

| ITEM | Cost in Rupees (Rs) | Percentage (%) |
|--|---------------------|----------------|
| Costs incurred in the hospital | | |
| Facilities set-up and capital assets | 65,00,00,000 | 35.09% |
| Facilities set-up | 14,87,20,000 | 8.03% |
| Labour-related costs | 8,94,40,000 | 4.08% |
| New hires and overtime salary | - | - |
| Staff support | HIGH | - |
| Other miscellaneous labour-related costs | 1,04,00,000 | 0.56% |
| Patient-care supplies and services | 4,78,40,000 | 2.58% |
| Medical supplies | 21,63,20,000 | 11.68% |
| Pharmaceuticals | 68,91,66,920 | 37.21% |

Table 2

From January to December 2020, 35,205 COVID-19 test swabs were performed on 19,611 patients admitted to the hospital. Of the 19,611 patients tested for COVID-19, 727 (3.7%) were positive for COVID-19. The median length of hospital stay of COVID-19 patients was eight days (6–13 days). Of the 727 COVID-19 patients, only three (0.4%) were admitted to the ICU for a median of two days (1–5 days).

Conclusion

COVID-19 has led to increase in healthcare expenses and displacement in hospital services. Our findings are useful for informing economic evaluations of COVID-19 response and provide some information about the expected costs of future outbreaks. The COVID-19 pandemic is an unprecedented challenge with immediate impacts on public and economic health.

Keywords: Covid-19, Healthcare, Economics, Hospital cost, ICU.

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COVID-19 and its Long-Term Impacts to the Quality of Life of Women Garment Workers: A Study of the Biyagama Export Processing Zone, Sri Lanka

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Abstract

This paper explores the long-term consequences of the COVID-19 pandemic on the Quality of Life (QOL) of women garment workers in the Biyagama Export Processing Zone (EPZ). As a particularly vulnerable population of workers attached to an industry that continued operations through much of the pandemic, their wellbeing is of particular concern. We conceptualize QOL, according to the World Health Organization (WHO) QOL-BREF model, to consist of four domains, namely physical, psychological, social, and environmental QOL. We base our findings on the responses of 120 women workers, selected using probabilistic sampling to equally represent their three types of residences; own houses, boarding places, and hostels. Semi-structured telephone interviews were conducted from June to July, 2021 during the peak of the "second wave" in Sri Lanka. Participants indicated that during the pandemic, government and company policies changed resulting in the closure of factories and job loss, non-provision of overtime pay, bonuses, and incentives, which supports literature indicating that workers experienced pay cuts during the pandemic. The long-term stability of the workers' environmental QOL and household wellbeing is likely to have been affected by these experiences. Many respondents reported having contracted Covid-19 (18.3 percent, relative to a national percent of 1.4) and complained of headaches, body pains, and exhaustion even after a year post-infection, indicating the risk to the long-term physical health of workers owing to persisting effects of the infection. Workers describe fear and stress associated with working within the pandemic context. A majority expressed loneliness as they have been not only isolated from family, as many work away from home, and isolated because others ostracize them for fear that they can be infected, thereby aggravating the issue of marginalization of these workers even in the years to follow. The findings of this study can benefit policy reforms in ensuring the sustainability of the apparel industry and worker welfare in the long-term and in times of crisis. The need to consider healthcare, which includes services to address social and psychological needs, and social safety nets, which provide some form of protection during times of uncertainty, is highlighted.

Keywords: Quality of Life, WHOQOL-BREF, Women garment workers, Export Processing Zone, COVID19, Sri Lanka

Introduction

The COVID-19 outbreak that originated in late 2019, conquered the whole world in less than a year. Not only did it claim millions of lives worldwide, but also the pandemic affected the global economy drastically (Pak et al., 2020). Many sectors in the economy, especially the tourism sector, education, pharmaceuticals industry, and manufacturing, faced numerous challenges (Ngwacho, 2020; Haleem et al., 2020). The global garment industry too was hit by the pandemic with the reduction of raw materials and the reduction in demand for apparel

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in high-income countries (Castañeda-Navarrete et al., 2020). In addition, its impact on the garment workforce that was directly infected with the virus is severe and concerning (Sen et al., 2020).

The consequences of the COVID-19 virus might seem to largely affect the physical health of those infected, but it has far-reaching effects that extend beyond the health implications (Morlacco et al., 2020). In addition, researchers are beginning to discover the long-term consequences of the virus, in terms of persistent severe symptoms, organ dysfunction (Greenhalgh et al., 2020), post-traumatic stress, and even job and economic losses (Jiang & McCoy, 2020). This paper reflects the long-term impacts of the pandemic on a vulnerable workforce during the COVID-19 outbreak, who continued to operate through much of the pandemic. This study analyzed not only the effects of COVID-19 on the physical health of Sri Lankan garment workers who were in the frontline of the outbreak (Aneez, 2020), but also its impacts on the psychological, social, and environmental quality of life, which are likely to have implications in the long term. We studied the 'Quality of Life (QOL)' of these workers using multiple facets belonging to four QOL dimensions, employing the 'World Health Organization Quality of Life – BREF (WHOQOL-BREF)' model.

Conceptualization

Literature indicates that QOL is a subjective evaluation of an individual's position in life (Nakane et al., 1999). It incorporates perceptions of physical health status, psychological state, level of independence, social relationships, personal beliefs, and interactions with the environment (Orley, 1996). The World Health Organization conceptualizes the QOL as multi-dimensional in its WHOQOL-BREF model. Accordingly, QOL consists of perceptions of health status, psycho-social status, and other aspects of life (Nakane et al., 1999; Steiner et al., 1996). In the WHOQOL-BREF model, attributes related to physical, psychological, social relationships, and environment constitute the QOL.

The physical dimension of the WHOQOL-BREF model incorporates activities of daily living, dependence on medication, energy and fatigue, mobility, pain and discomfort, sleep and rest, and work capacity, while the psychological dimension of QOL includes positive and negative feelings, spirituality, religious and personal beliefs, thinking, learning, memory, and concentration, bodily image and appearance, and self-esteem. The social QOL consists of social attributes namely, personal relationships, sexual activity, and social support. Freedom, physical safety and security, physical environment, finance, opportunities for acquiring new information, opportunities for leisure, home environment, health, and social care accessibility, and transport, constitute the environment QOL (Orley, 1996). In this paper, the long-term impacts of COVID-19 on women garment workers' QOL are studied through these 4 key areas; physical, psychological, social relationships, and environment, as indicated by the WHOQOL-BREF model.

Methods

The Biyagama Export Processing Zone (EPZ) was selected as the study site as it is one of the two largest EPZs in Sri Lanka, that was heavily affected by the pandemic (Daily News, October 31, 2020). We interviewed one hundred and twenty women workers employed in garment factories in the Biyagama EPZ through telephone for this study. The *Grama Niladhari* (Village Officer) of the area provided contact details to reach these workers. Participants were selected

from the three predominant types of residences of garment workers; own houses, boarding houses (rented lodgings), and hostels, to obtain an equal representation as residential type was likely to significantly affect one's quality of life.

A semi-structured questionnaire format was employed to inquire in-depth about the experiences of the workers during the pandemic, using open-ended questions such as 'How did COVID-19 affect your physical QOL?' and 'Did the pandemic cause any change to your social relationships?'. These questions were employed to cover all 4 areas; physical, psychological, social, and environment-related experiences of these workers during the pandemic. Data were collected in June 2021, a period in which the virus outbreak was at its peak, and garment factories were ordered to function, although the island was in lockdown with travel restrictions in place (Human Rights Watch, 2021).

Data obtained during this study were analyzed thematically (Burnard et al., 2008). This paper is built on newspaper articles, media interviews, other recent literature, and the narratives of participants. The names indicated in the narratives are not the participants' own, and such were employed to maintain the anonymity of the workers who participated in this study. In addition, we explored to obtain a well-rounded understanding of the issue for this study. Before the conduction of the study, ethical clearance was obtained from the Ethical Clearance Committee of the Faculty of Agriculture, University of Peradeniya.

Results and Discussion Long-term impacts to environmental QOL

The pandemic reflected the fragile nature of the garment industry in terms of its workforce and their wellbeing. Due to the COVID-19 outbreak, factories suddenly closed and many workers in EPZs were laid off (Senaratne, 2020). Participants reported salary cuts, reduced overtime hours, and the non-payment of incentives for target completion. According to participants, several companies paid only the basic salary for workers during the pandemic. This is substantiated by Kavindi et al. (2021) who report that garment companies reduced the provision of benefits, cut down salaries and reduced overtime hours for workers specifically by reducing salaries by 5% - 60%, depending on the worker's salary level to reduce the cost to the companies during the pandemic.

The loss of economic benefits from the workplace was also coupled with the loss of jobs of family members of some workers, as reported by several participants of this study. For instance, Leela (46 years) reported that because her husband's business collapsed during the pandemic, they had to rely on her salary alone.

The workers employed in the garment industry in Sri Lanka already receive relatively small salaries for large workloads, which have even been described as excessive (see Wijethunge, 2021). On top of it, COVID-19 resulted in workers obtaining an even lesser amount, both on their own and also from their families, which is likely to have caused economic hardships and financial struggles in the workers' families as indicated by them. As a result, respondents report that they must depend on bonuses, incentives and overtime hours to be able to support their families. But the non-provision of such benefits drastically affected the financial inlet for workers, with implications on the long-term economic health of their households. COVID-19 and the company policies in reducing financial benefits during COVID-19, has threatened the economic stability of workers' households at a very crucial time. Being financially insecure at a crisis time, also with an impending economic downturn in the country has placed these

workers' future activities and plans at risk. This is a serious concern for Sri Lanka, as, the World Bank (2020) has predicted a similar situation for Cambodia, that rural households reliant on the garment industry faced tremendous economic hardships leading to an estimated increase in poverty rates by over 20%.

Considering the connections between income and other forms of QOL, the impact of these effects can be broadly felt. For instance, strain caused by worries about livelihood can impact a family member's psychological state (Ullah, 1990), cause tension within families (Leana & Feldman, 1988), and create social instability (Knight, 2014) over the long-term. These effects could have been mitigated if the country or the companies involved had in place welfare schemes or unemployment insurance schemes. Instead, the economic uncertainty and hardship caused by the pandemic were felt acutely by those that could least affort to bear such burdens.

Long-term impacts to physical QOL

The study reflected that 18.3% of the respondents were infected with the COVID-19 virus, which is substantially greater than the 1.35% infection rate (WHO, 2021) for the Sri Lankan population around the same time. Many of the infected workers reported persistent symptoms after a year post-infection, when the study was still undergoing. Workers complained of persistent breathlessness, headaches, heavy exhaustion, and chest pains following being infected with the virus. Workers who used to walk to their factories from their place of residence every day, related how they experience difficulty to walk a few meters without losing their breath, even an year post-infection. Several infected workers indicated how they struggle to perform simple activity such as few minutes of talking and simple job tasks, which they could easily complete prior to being ill. Some complained of persistent back pains after the virus infection, which is likely to hinder the women's work at the factories as well as places of residence. Nimali, a home resident reported how she contracted COVID in the year before the conduction of the study, but still after an year post-infection, she feels tired to do simple tasks. She explained how she could not climb stairs or talk for more than a few minutes without losing her breath as a result of the infection.

The garment workers' persistent after-effects of the COVID-19 virus indicate the likelihood of occurrence of 'Long COVID' which is studied as the long-term effects of the coronavirus (Belmonte, 2022). Recent studies have found that persistent symptoms such as fatigue, breathlessness, and chest tightness could lead to organ damage, post-viral syndrome, and post-critical care syndrome in the long-term (Raveendran et al., 2021), which is an issue that concerns the garment workers in Sri Lanka as well as they experience similar conditions as reported through this study.

Such prevalent after-effects are also likely to risk the long-term health of the workers who already perform repetitive and physically demanding jobs. Garment workers report how they work their machines throughout the day for 8 to 12 hours straight, either being seated or standing, indicating the physical stresses the workers are required to undergo on a daily basis. Studies have also found that such physical strains lead to musculo-skeletal problems, which is an issue that is largely prevalent among the garment workforce (Lombardo et al., 2012). The after-effects of COVID-19 could aggravate such already-persisting issues, by inhibiting physical activity and fitness of workers in the near future and beyond, and limit workers in performing their jobs effectively.

Workers indicated that during their sickness both the companies and the country's healthcare facilities addressed their healthcare needs. This was particularly so during the early stages of the pandemic. However, the complaints made by respondents indicate that although they were faced with the consequences of long term health effects of COVID-19, nothing seems to have been done to support workers through this long recovery period. Further, the long term health effects seem to have resulted in concessions in terms of workload, indicating that like environmental QOL, diminished physical QOL was also felt primarily by workers and the effects went unrecognized by the companies.

Long-term impacts to psychological QOL

The pandemic not only directly affected the physical health of the infected workers, it also took a toll on the psychological wellbeing of workers who were operating within factories extremely vulnerable to the outbreak. Although the first and second waves of the pandemic were lockdown periods for most workers, the garment factories were ordered to remain in operation and its employees who were not laid off were expected to physically report to work (Human Rights Watch, 2021). The participants of this study described the experience they underwent within factories at a period of uncertainty, anxiety, and vulnerability. Workers reported that they had to labor in crowded factories, in constant fear and anxiety of contracting the virus both at the workplace and their communal residences.

Participants of this study also reported how the family responsibilities during the pandemic has become a mental distress for those who had to work during the pandemic. Working mothers were challenged in balancing their job and the children's online education which was a responsibility that predominantly fell on their shoulders. School closures that limit children to learning from home during the pandemic is found to increase the stress of parents who take care of them and reduce opportunities for their career advancement, with possibility to affect the childrens' and parents' long-term psychological wellbeing as well as the future of their careers (Fuchs-Schundeln et al., 2020). On top of it, workers who were living away from home were worried of their families becoming infected and were in guilt for not being able to assist and care for the families in times of need.

Although workers have undergone such experiences during the pandemic, and have suffered anxieties, mental distress, and fear during the period of COVID, these conditions should not only be regarded as short-term occurrences. Studies indicate that COVID-19 is highly likely to have long-term consequences on the psychological health in terms of causing emotional distress, fear, depression, and anxiety (Mukhtar, 2020). Furthermore, familial responsibilities, child care, and guilt if family members contract the virus aggravate such mental health conditions (Jiang & McCoy, 2020). Front-line workers during the pandemic are subjected to long-term psychological consequences and post-traumatic stress as a result of working under stressful conditions (Zaka et al., 2020), which is also likely to be observed through the participants of this study in the long-term, who reported negative mental health conditions as a result of working in stressful, risky, and unsafe environments.

Although garment companies and the government introduced special healthcare services for workers during the early stages of the pandemic; in terms of quarantine measures, medical attention, and vaccination priority, no measures were taken to look after the psychological wellbeing of workers, which is equally important. It is essential for workers living and working in stressful environments, away from the comfort of their families to have a support system or

access to counselling services, which were not provided for these workers during or after the pandemic, to ensure sound psychological wellbeing in the long-term.

Long-term impacts to social QOL

During the COVID-19 pandemic, social distancing measures were implemented within garment companies in Sri Lanka to contain the spread of the virus and to limit the number of infected cases (ILO, 2020). As reported by the workers, social distancing measures within the workplace isolated workers from their colleagues and friends and prevented them from talking and eating together, which was a collective activity they used to do before the pandemic. Not only were they isolated at work, they were isolated from their family and friends at home too. Workers indicated that they deliberately distanced themselves from their families due to the risk of infection they carry which has potential to infect the family. Therefore they lacked the much-needed social support from colleagues during a crisis time, while also lacking such support and intimacy from their families during a time of need. This could have long-term implications beyond the duration of the pandemic through the disruption of close bonds and loss of closeness among family members as well as friends (Hess & Waring, 1978).

The study also revealed another aspect of social bonds of garment workers and how it was affected by the pandemic. Participants related how during the pandemic they experienced discrimination and hostile behavior from the broad society. When the COVID-19 outbreak spread extensively to the garment population, the society started viewing these workers as potential carriers of the virus who were almost treated as criminals who contribute to the spread of the virus, as explained by the workers who faced such experiences. Several workers related that their close relatives and friends ignored them, or expressed their outright fear in a somewhat abusive language when they were encountered due to their fear of infection through these workers. Niluka, a worker residing at her own house recalled her experiences, saying how her relatives say offensive things when they meet her, due to their fear of getting infected through her.

Garment workers are already a socially marginalized group of workers in Sri Lanka who are stigmatized as 'immoral women' living alone and away from home, with unrestricted freedom (Hewamanne, 2006). The experiences these workers face during the pandemic is likely to fuel the stigmatization and discrimination they suffer, thereby pushing them further to a marginalized space, even in years to follow. In addition, the experiences of Sri Lankan garment workers are similar to the experiences faced by ethnic minorities such as Sri Lankan Muslims, and Asians living in the US and Canada, who are subjected to racial microaggressions during the pandemic with implications for long-term consequences (Choi, 2021; Silva, 2021). It should not be lightly regarded that the issue of isolation of women workers from the society as well as from their immediate families is likely to cause cognitive decline and affect their long-term relationships, social support, and social recognition (Simard & Volicer, 2020).

The importance of the connection between garment workers and their families or friends during the pandemic has not been recognized by the companies. It would have benefitted the workers if companies implemented measures to develop the social wellbeing of workers and foster their connections with families, for instance through the provision of communication packages during the pandemic. In addition, garment companies have failed to defend their workers who face discriminations from the society during the pandemic or appreciate their invaluable service to keep the economy afloat during a crisis.

Conclusions

This paper reflects the QOL experiences of the women garment workers in the Biyagama Export Processing Zone of Sri Lanka during the COVID-19 pandemic, that are likely to have long-term consequences. We describe the long-term effects of the COVID-19 pandemic through four key areas; environmental, physical, psychological and social QOL. The study indicated that the pandemic was a reflection of the fragility of the Sri Lankan garment industry in terms of the job security and insecure social protection of workers which also threatened the sustainability of garment companies. The pandemic placed workers at risk by causing economic hardships and job and economic losses to families, which is likely to make them difficult to cope with the impending volatile economic activities in Sri Lanka and thereby pushing them to the brink of poverty (Brickell et al., 2020; World Bank, 2020).

COVID-19 also directly affected the garment workers in Sri Lanka by infecting them in a substantial manner. Not only was a large portion of workers (18.3%) infected, but many of them experienced after-effects which are likely reflections of 'Long COVID' symptoms that are studied by researchers in the world today (Belmonte, 2022; Raveendran et al., 2021). In addition, the stress, fear and anxiety that the workers undergo on a daily basis, alongwith the psychological burden fuelled by family responsibilities and loneliness has implications on the long-term psychological wellbeing of workers (Mukhtar, 2020; Zaka et al., 2020). The garment workers experienced isolation from colleagues and families during the pandemic, and also were subjected to stigma and discrimination from the society owing to the risk of infection that they carry. For a group of workers who are already marginalized in economic and social spaces in Sri Lanka (Hewamanne, 2006), such stigmatization during a crisis time is likely to be an inevitable cause for long-term neglect and further marginalization of these workers by the society.

The long-term consequences of the pandemic on the environmental, physical, psychological, and social QOL of the women garment workers should be paid great concern and attention, as it is not observed extensively at present, but will give repercussions in several years to come. Therefore, it is the responsibility of garment companies and the government to identify these consequences and develop policies to effectively curtail the negative effects. It is immediately necessary to conduct health campaigns to identify the long-term effects of the COVID-19 virus on the physical health of the infected, thereby to introduce regular health monitoring systems and care for workers. In addition to the physical wellbeing, it is essential to monitor the psychological and social needs of workers post-pandemic and strengthen counseling services in treating for mental distress, trauma, and loneliness. Workers should also be protected through social safety nets during crisis times, thereby requiring the immediate attention of the government to form some mechanism to ensure the workers' efforts during the pandemic are rewarded, to ensure their long-term economic wellbeing.

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