Medical research and publication in a national and international economic crisis

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Medical research plays a pivotal role in improving the healthcare landscape and addressing the specific needs of populations, particularly in lower income countries. A strong medical research base will ensure the well-being of the population, improve health indices, reduce healthcare costs and improve the overall quality of life of its people. However, in many low-income countries research is not given a high priority, and does not have a consistent growth. Instead, it is often subject to ups and downs due to a variety of external and internal factors within a country [1]. Economic and political stability are two key factors that would determine the conduct and dissemination of research and hence critically vulnerable in economic and political crisis.

Economic crises whether at national or international level can be caused by a variety of factors, including wars, civil unrest, economic sanctions, natural disasters, economic recessions, global financial collapses as well as political instability in a country. In recent times the global economy was immensely impacted by the COVID-19 pandemic with the World Bank predicting a decline in global economic growth of almost 8% [2]. As a result, the low- and middle-income countries were affected much more than the developed. Such events bring about uncertainty across various segments in a nation including healthcare and research [3]. For instance, the healthcare system of Sri Lanka was hit by a double burden of COVID-19 and economic downfall due to political instability which led to an increase in people’s need for healthcare and reduced access, especially the most vulnerable groups in the society. The shift of patients from out-of-pocket expenditure to public hospitals further stressed the burden on the healthcare system [4]. In a situation where the demand for public healthcare is growing and difficult to meet, the importance of medical research becomes more apparent.

Impact of economic crisis on medical research

Healthcare system

Access to health care is a fundamental human right, and the path to universal health coverage requires medical services that rely strongly on evidence from high quality unbiased research. Research guides policymakers and helps them make informed decisions, and this evidence-based approach is crucial to designing effective health policies as well as systems. It is evident that investing in health research and systems is not just about addressing the specific health needs of a country, but also about strengthening the foundation of public health policy [5]. Therefore, medical research, evidence-based decision-making and a robust health infrastructure are important components of a healthcare system to ensure the quality and universal healthcare delivery.

One of the biggest challenges a country faces is how to use its limited public finances to improve the lives of its citizens. This means, deciding where to allocate money in different sectors, and how these decisions are made. During an economic crisis this becomes extremely challenging, and governments may need to prioritize addressing the most urgent and essential needs as well as public demands. One of the easiest areas governments can impose budget restrictions is research and development. Which may not be considered very important by the wider community. Such restrictions invariably limit the ability of researchers and research organizations to adapt to the
challenges [6,7]. However, budgetary reductions on medical research including clinical and public health research can significantly impact the progress and results of such research resulting in a vicious cycle where the ability of the healthcare system, to make informed decisions would get affected ultimately hindering the implementation of vital interventions that directly affect the health and well-being of the general public [3].

Nevertheless, during an economic crisis, governments can and should use the situation as an opportunity to enhance the performance of the services by conducting timely and cost-effective research to develop policies that reduce costs and make service delivery more efficient, especially in areas like primary care. Furthermore, research will be most important to evaluate the effects of the economic downfall on policy responses and the health system outcomes as well as to identify new health challenges like childhood malnutrition, maternal and child care [6].

**Funding, resources and research**

A country’s health research capacity is reflected on its ability to use scientific research to address and solve major health issues at both the individual and institutional levels. This capacity can be evaluated by considering factors such as the percentage of funds allocated from the gross domestic product to research, the number of researchers, the quality and quantity of research publications, and the number of patents generated [8,9].

Different organisations, including government agencies, private institutions, charitable foundations and programmes support research by providing grants, scholarships and fellowships that would help advancement of research [5]. However, a global and national economic crisis would affect both the governmental and non-governmental research funding organisations funding capacities. In addition, depreciation of the local currency against the US dollar can have a substantial impact on the funding available for research. As a result of lack of funding, economic crises can impact the availability of resources necessary for research, including medical equipment, laboratory supplies, and access to technology.

In the past, the European debt crisis has had a negative impact on research funding, where major funders of biomedical research reduced their funding, resulting in the discontinuation of various collaborative research projects [10]. Termination of ongoing clinical studies involving patients can have a negative impact on the trial participants and resuming such studies again would be challenging [10]. Community based research involves the willingness of individuals to voluntarily participate. However, in times of economic crisis, individuals may be less likely to participate in research, as their priorities often move towards addressing immediate concerns such as food, medicines, and shelter, reducing the cooperation of the general public on research by committing their time on research activities.

**Brain drain and loss of research culture**

Funding plays a crucial role in motivating researchers to produce high quality work as well as retaining them in the field of research. Scarcity of resources and poor salaries can pressurise researchers to explore other options or consider seeking opportunities abroad further diminishing the capacity for conducting high-quality medical research in low-income countries. Moreover, limited resources make it difficult to attract and retain talented individuals in the research field [11]. These would lead to an overall reduction in research output of a country and weaken the research culture.

**Impact of economic crisis on publication and dissemination of research findings**

In an economic crisis, academic journals and publishers can face financial challenges. As a result, they may change the frequency of publication, close certain journals, or restrict access to research by placing payment requirements. In addition, it would make it difficult for researchers to publish their work in reputable journals. Furthermore, the dissemination of research findings can be hampered during economic crises, as limited funding may restrict the researchers ability to attend and present at scientific conferences. These changes can affect the sharing of scientific knowledge, making it less accessible to the wider public.

**The way forward**

In the face of an economic crisis, it is imperative for low-income countries to safeguard their medical research initiatives and ensure the continuation of critical scientific endeavors. This may require the establishment of sustainable funding mechanisms, resource allocation prioritization, and strategic partnerships with international organizations and funders to mitigate the adverse effects of economic downturns on medical research.

Those involved in the field of research and development should emphasise the importance of research on policy makers and ensure that critical research funding continues even during economic downturns [7]. Senior researchers have a major role in identifying new avenues of research funding such as international funding as well as diversifying funding sources and fostering collaboration to sustain research efforts. Encouraging partnerships on a global scale can help address funding shortfalls.

In addition changing the gear from moving from high cost laboratory based fundamental research to practically more important translational and implementation research as well as epidemiological research to find out changes in
disease patterns and new health challenges would make research attractive for the community and policy makers in a time of financial crisis.

Lessons from the European debt crisis emphasised the need to pay close attention to the career paths of young scientists to prevent them from leaving for better opportunities elsewhere. Another key lesson was to establish a strong and collaborative link between academia and industry to create thriving and mutually beneficial partnerships [10]. This will not only combine knowledge but also attract different funding streams.

In conclusion, medical research in low-income countries is essential for addressing local health challenges and contributing to global health knowledge. However, economic crises pose significant challenges to the conduct and dissemination of medical research in these settings, potentially hindering advancements in healthcare and exacerbating health inequalities. It is crucial for stakeholders to recognize the importance of sustaining medical research during economic downturns and implement measures to preserve and support research initiatives in order to continue improving health outcomes for populations in low-income countries.

References


