

Health policy and systems research: an inconsistent priority in South East Asia

Manu Raj Mathur^a, Aayushi Gurung^a, Sakthivel Selvaraja^a and K Srinath Reddy^{a,b}

^a Public Health Foundation of India, Gurugram, Haryana, India

^b Corresponding author: ksrinath.reddy@phfi.org

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Key points

- There are gaps in the understanding of health policy and systems research (HPSR) across the South East Asian region (SEAR)
- HPSR struggles to find a place in the priority setting of national health agendas in most SEAR countries
- There is a need to increase the number of HPSR-trained researchers
- Dedicated national funding streams are needed to mainstream HPSR in academic frameworks

Abstract

Objectives and importance of study: The need for sufficient and reliable funding for health policy and systems research (HPSR) has attracted varying responses globally. Countries assisted by the South East Asian Regional Office (SEARO) of the World Health Organization (WHO) together make up one-quarter of the world's population. HPSR is not given a high priority in several SEARO countries, so there is a need to understand the barriers and facilitators that influence national HPSR funding. Our study aimed to fill this gap in the literature by studying the barriers to HPSR in five SEARO countries – Republic of Maldives, Nepal, Sri Lanka, Thailand and India – and the key political factors influencing HPSR funding.

Study type: Mixed methods.

Methods: We conducted an in-depth desk review to obtain a general overview of HPSR in the five SEARO member countries. The review findings were used to frame a discussion guide for semi-structured interviews with key policy makers, health system experts and academics in the intervention countries. During the interviews, we validated the data from the desk review and explored the following key themes: a) the existing health system landscape of the country; b) organisations involved with HPSR; c) the nature of HPSR funding in the country (demand/supply led); d) budgetary allocations for HPSR; e) barriers to HPSR funding; f) measures to strengthen HPSR funding; and g) suggestions for the right mix for future HPSR funding. The study was conducted from October to December 2020.

Results: Thailand is the only country among those studied with a well-established institution dedicated to HPSR. India, Sri Lanka, Republic of Maldives and Nepal are still lagging in providing a solid foundation for HPSR. Most of the countries lack a common definition of HPSR and a dedicated stream for HPSR funding. There is also a lack of local capacity to independently lead and conduct HPSR in most of the study countries.

Conclusion: We have provided a profile of the existing landscape of health systems in the SEARO member countries and highlighted the determinants of HPSR funding. A common definition and interpretation of HPSR is required,

which extends beyond geographical and disciplinary boundaries. There is a need for enhanced core domestic funding along with increased recruitment and availability of HPSR researchers in the study countries.

Introduction

The importance of health policy and systems research (HPSR) for providing evidence to guide initiatives to strengthen a country's health system has been increasingly recognised in recent years. The HPSR field has witnessed rapid development in research publication and global discussion.¹ HPSR seeks to generate fresh evidence for societies to help them to achieve the goals they identify for their health systems. The United Nation's sustainable development goals (SDGs) include promoting access to, and quality and equity of, health systems² and achieving improved health outcomes.^{3,5} HPSR has now been recognised as an important instrument for applying evidence for informed decision making.⁴ Tracking and understanding how funds flow to HPSR is critical to understanding the level of recognition accorded by national policy makers and to informing future advocacy efforts.

Research priority setting engages policy and decision makers in identifying key challenges, and framing and prioritising research questions, to help ensure scarce research funding is used most efficiently.⁵ It is not only developing countries, but rich countries with unbalanced public–private institutional arrangements that struggle with the growing costs of health systems caused by inefficient use of resources.⁶ Health is a US\$3.5 trillion industry globally, equal to 8% of the world's GDP.^{5,6} Yet each year more than 100 million people are impoverished because of health costs.⁶ Global funding for HPSR is primarily focused on program and implementation questions, with the primary aim of scaling up priority services.⁷ However, there remains a lack of clarity and shared understanding about the role of HPSR.^{8,9}

South Asian and several South East Asian countries are linked to a common regional office of the World Health Organization (WHO). The South East Asia Regional Office (SEARO) has national members that are mainly low- and middle-income countries (LMICs). The region's health systems are diverse and studies show a lack of demand for research and research evidence to inform decision making, especially in HPSR, in LMICs.^{10,11,12} Most LMICs suffer from inequalities in access, affordability and availability of healthcare services, possibly because of the low value placed on available research, as well as inadequate recognition of the potential of HPSR to contribute to policy development.¹³ In addition, constrained and uncertain funding inhibits the growth and development of HPSR, despite the great need for it¹³ Further, reliable information on dedicated funding for HPSR is comparatively limited in many countries, which makes assessment of resource allocation difficult and

further stifles the growth of research in this area.^{4,13} This paper aims to identify the funding challenges faced by HPSR, while profiling how political determinants influence the financing of such research. It reports on the prevailing attitudes towards HPSR funding in five SEARO member countries, considering production capacity and quality of research as proxy indicators.

HPSR in the LMIC context

In the context of LMIC, HPSR funding can often be largely supply driven, notably by donors and different arms of government. To a limited extent HPSR funding can also be driven by civil society, private enterprises and partly by subnational governments in countries that follow federal structures (such as India and Indonesia). Evaluating specific health programs, technology assessments and capacity building are common purposes for which funds are set aside by donors and government. As part of corporate social responsibility, private enterprise also initiates programs, albeit in a fragmented manner, as operational research to bolster government schemes. As new drugs, vaccines, medical devices and programs are introduced into government health systems, especially in countries that are moving towards single-payer systems or universal health coverage schemes (such as Thailand, Indonesia and the Philippines)¹⁴, domestic governments have been contributing to the development of research initiatives drawing multidisciplinary research teams from within the country.

Another development in recent years is that governments in many countries are moving away from vertically driven disease control programs towards horizontally driven health system strengthening. This requires health system thinking and evidence to support health system strengthening. India's move towards health system strengthening since 2005, through its National Health Mission¹⁵, is one such example. On the other hand, demand-led research into HPSR is often driven by medical institutions, universities and civil societies that are interested within the confines of their curriculum and priorities, and partly led by knowledge-creation and evidence-informed research involving development of frameworks, metrics, methods, etc. While development of frameworks, metrics and methods are taken up as part of larger university/academic contributions from respective institutions, a larger focus is around generating evidence and knowledge, which are funded by governments or donors. Financing for HPSR in the current context in the South East Asian region appears to be primarily supply driven rather than demand led.

Methods

Working definition used for HPSR

In its broadest sense, HPSR can be described as research focusing on the health system and its relationship to its components that produce health outcomes and financial risk protection (healthcare delivery, workforce, financing, governance and regulation).^{16,17} HPSR examines the social determinants and health system interactions underlying health policies and programs rather than clinical outcomes and health services management. It seeks to integrate health policy and health systems by creating knowledge and evidence driven by well-informed research. It “encompasses research on the policies, organizations, programs and people that make up health systems, as well as how the interactions amongst these elements, and the broader influences over decision-making practices within the health system, influence system performance”.¹⁷ HPSR often relies on a range of disciplines including epidemiology, anthropology, sociology, economy and political science.^{16,18}

An in-depth desk review was conducted for relevant literature on PubMed and Google Scholar. Our research frame included the following countries: Nepal, Sri Lanka, Republic of Maldives (Maldives), Thailand and India. These five countries out of 11 in the South East Asian region were included based on criteria including per capita income and per capita public expenditure on health, capturing variation among them. In 2000, GDP per capita varied from US\$7455 in Maldives, an upper-middle income country, followed by US\$7189 in Thailand, US\$3682 in Sri Lanka, US\$1900 in India and US\$1155 in Nepal.¹⁹ In 2018, domestic government health expenditure per capita ranged from US\$687 in Maldives to US\$210 in Thailand, US\$65 in Sri Lanka, US\$20 in India and US\$14 in Nepal.²⁰

The review helped guide discussion during key informant interviews and assisted in developing a baseline for HPSR funding in the WHO SEARO region. In India, we undertook the study in five states – Odisha, Meghalaya, Tamil Nadu, Kerala and Uttar Pradesh along with the central government. States were chosen from different geographical regions; two from southern India (Kerala and Tamil Nadu), widely regarded as the two states with the best-performing health systems²¹ and a higher level of commitment to health equity; one from north India and one from east India which were chosen because they were economically weaker; and one northeastern state chosen because it represents a very actively evolving health system.

Scoping the literature

An initial desk review was conducted to obtain a general overview of the scope and nature of HPSR funding in South East Asia. To further mirror our research aims and

objectives, we identified the range of terms to be used for a literature search.

Search strategy and study selection

A total of 281 relevant abstracts were obtained from the initial search, from which 24 full text articles were selected for an in-depth review after screening the search result in three stages: a) by scanning their titles; b) abstract screening; and c) full-text screening. Eight peer reviewed articles published between 2010 and 2019 were included for our final analysis. The search terms included ['medicine' AND 'health policy' AND 'health system research' AND 'health policies' AND 'system research' AND 'funding' AND 'region (India/Maldives/ Nepal/Sri Lanka/Thailand)']. This search strategy was used to identify published papers in PubMed, ResearchGate and Google Scholar.

In-depth interviews

Based on the results from the desk review, a detailed discussion guide was prepared for the interviews. During the interviews, we validated the data from the desk review and explored the following key themes: a) existing health system landscape of the country; b) organisations involved with HPSR in the country; c) nature of HPSR funding in the country (demand/supply led); d) budgetary allocation for HPSR; e) barriers to HPSR funding; f) measures to strengthen HPSR funding; g) suggestions on the right mix for HPSR funding for the future. We also asked interview participants for any further comments.

We undertook 23 qualitative key informant interviews from October to December 2020 with key policy makers, leading academics, development partners and senior researchers in health systems and policy from the five SEAR countries chosen. The interviews were conducted online using the Zoom videoconferencing platform (San Jose, CA: Zoom Video Communications Inc) due to travel restrictions imposed by the coronavirus disease 2019 (COVID-19) pandemic. The interviewees selected for the study belonged to: a) national research directorates/ research councils; b) ministries of health; c) multilateral and national research organisations; d) national research funding agencies (e. g., medical research councils or national research foundations); d) international development partners; f) leading research institutions in medical or HPSR fields.

Data collection

Researchers with prior experience and training in carrying out key informant interviews, led by the study's principal investigator, undertook the interviews. All interviews were conducted in English and were audio recorded, transcribed and cross-checked against the original recordings by two researchers.

Data analysis and management

The translated transcripts were coded using Atlas Ti software (Basel: Scientific Software Development GmbH; version 7.2). The coding framework was based on the key themes and became more detailed as analysis progressed. Senior team members reviewed and finalised the coding and categorisation of data. We also used MAXQDA software (Berlin: MAXQDA; 2020) to develop analytic word clouds. These provided data visualisation of the most frequent words used in the transcripts, for developing themes and subthemes. The final analysis was performed with input from all team members who helped conduct the interviews. Key quotations from the in-depth interviews were also selected to represent the participants' views. Verbal consent was obtained from all participants prior to starting and recording the interviews, after explaining the nature of the study in detail and answering any questions they had about the study.

Ethics approval was not sought for this study. Interviews were conducted to obtain perspectives of key individuals and recorded with the verbal audio/video consent of respondents. Apart from their perspectives, we sought their expertise for identifying sources of published or grey literature from their respective countries. Most analysis was done from country reports and an in-depth desk review and interviews were used to explore the findings of these reports.

Results

Our desk review highlighted that although HPSR publications on study countries have increased over time, most funds for health research in the study countries were allocated to biomedical and clinical research. No record was obtained for HPSR-specific funding support in India, Nepal and Sri Lanka. In Thailand, a proportion of funds were dedicated to HPSR. In India, Nepal, Maldives and Sri Lanka, health systems research had no separate division, and our understanding of HPSR funding was gleaned from reports and published literature (HPSR was not mentioned and discussed in annual reports from key funding agencies). Data for funding/grants (budget estimates only define health and research to some extent) was available. However, a separate demarcation of HPSR was not found. There is in general a scarcity of published articles (evidence based) and reports related to financing, political attitudes and determinants of HPSR. The review also highlighted that multiple players conduct health-related research in the SEARO region, including government agencies, nongovernment agencies, public and private universities; the research is focussed less on HPSR compared with medical and clinical research.

The findings of the desk review helped us develop the interview discussion guide and identify the key informants for extracting country specific information. Together with analysis of the in-depth interviews, this informed the findings detailed below and summarised in Table 1.

Overview of the existing landscape of HPSR in SEAR countries

Among the SEAR countries, only Thailand can boast a well-established institutional structure for guiding HPSR. The Health Systems Research Institute (HSRI) was established under the HSRI ACT (1992), which led to the emergence of the International Health Policy Program and the Health Intervention and Technology Assessment Program (HITAP) as part of the Ministry of Public Health and the Health Insurance System Research Office under the HSRI. In 2018 the HSRI granted US\$12 million and in 2019 US\$13 million, for HPSR.

In Maldives, the National Health Research Committee is primarily responsible for all research activities in the country including clinical research and HPSR. In recent years, Maldives National University has played a strong leadership role in research initiatives to expand the scope of HPSR.

In Sri Lanka, HPSR as a discipline is in a nascent stage of development. Research activity and funding has not been a priority of the government in the past few years. The National Health Development Committee under the Ministry of Health has been meeting to revisit national health priorities in the past 10 years but none have been added for HPSR, as mentioned by one of the interview respondents.

As for Nepal, since the establishment of the Nepal Health Research Council in April 1991, the country has focused on strengthening research capability to train individual researchers on research methods and aims to maintain high levels of quality and ethical standards of various research projects undertaken in the country. Nepal prioritises health policy and programs based on evidence which has been documented.

India, on the other hand, has a mixed healthcare system including public and private healthcare providers. Health is a state responsibility in India and implementation of initiatives lies with individual states. However, the central government initiates and partially funds several national health programs, which the states may opt to implement. Like other comparable countries in the region, current research in India is largely focused on clinical/biomedical research, which receives a large part of the funding. Although epidemiology-based research is given primacy, in recent years there have been initiatives to provide funds and encourage research in HPSR by the Department of Health Research/Indian Council of Medical Research (DHR/ICMR). Furthermore, a National Health Research Policy is being drafted by the DHR and the ICMR, its constituent body. Another area of funding is through health technology assessment (HTA), for carrying out cutting-edge cost-effectiveness studies involving medicines, medical devices and public health interventions.^{22,23,24} Although nascent in the Indian context, HTA in (Health Technology Assessment in India), which comes under the DHR, has driven an agenda of building

capacity and generating evidence with specific funds allocated for the past few years.²⁵

Thailand is a role model in the HTA area, with HITAP, a semi-autonomous research unit under the Ministry of Public Health, carrying out cutting-edge cost-effectiveness analysis with dedicated domestic funds.

Organisations/ministries involved in budget allocation

Organisations that provide research funding in Thailand include a) The Royal Thai Government; b) development agencies; c) universities; d) non-government organisations; and e) the Ministry of Public Health. Organisations involved in managing research include a) Thailand Research Fund; b) National Research Council of Thailand; and c) HSRI. In Sri Lanka, the Ministry of Health, National Science Foundation and National Research Council are key organisations that finance research. The Nepal Health Research Council is the key agency that takes decisions about health systems research; the Nepal Ministry of Health decides the allocation of funds to various ongoing health projects and programs. In special circumstances, high-level political directives also determine funding allocation for research. For example, as one respondent from Nepal stated:

[In] this year's presidential speech on policy and plans, research on communicable disease was mentioned, with budgetary backup to be carried out by NHRC [Nepal Health Research Council].

In Maldives, the Ministry of Health is the apex decision making body. The National Health Research Committee, the Maldives National University and the Ministry of Health are the key stakeholders in decision making and resource allocation for health research, which forms a very small part of the overall budget. In India, organisations that allocate resources for Research in Health are the ICMR, DHR, Ministry of Health and Family Welfare, Department of Biotechnology, Department of Science and Technology, Defence Research & Development Organisation (DRDO) and Council for Scientific and Industrial Research (CSIR).

Budget allocation for HPSR

Among the SEAR countries studied, Thailand is the only one with a well-established system of HPSR funding. Eighty per cent of funds are provided by the government and the remaining 20% from external sources. In the 2018 fiscal year, the budget was US\$12 million from the HSRI, in 2019 and 2020 it was US\$13 million for HPSR. The annual outlay on research is approximately US\$5 million. Of this, less than 30% is from international sources and 70% from domestic sources. Personnel costs account for a large proportion of the expenditure. Maldives, Sri Lanka and Nepal are largely dependent on external donor agencies and multilateral organisations for health research funding. Nepal Health Research Council received US\$4 million in 2019 for health research

projects, of which only US\$30 000 was allocated for health system projects, with another US\$30 000 for policy research.²⁶ According to the Sri Lanka National Health Accounts annual report, out of total of (approximately US\$131 million) for healthcare services, approximately US\$250 000 was dedicated to operational research – 0.2% of current health expenditure in Sri Lanka. Health system and financing administration was 1.3% of the total share of healthcare services.²⁷

Budgets are allocated according to the priority setting of government agencies in most countries. In India, a large proportion is allocated to biomedical and clinical research. ICMR is the only health research body that directly receives funding from the central government budget. In 2020–21, ICMR's allocation of approximately US\$290 million was an increase of 7.7% on the amount allocated to health research in 2019–20.

Nature of HPSR funding: demand or supply led?

Sri Lanka, Maldives and Nepal have a supply driven HPSR funding system, whereas India has a mixed structure for HPSR in the various regions with a larger proportion of funds reserved either for biomedical or clinical research programs. Thailand has a well-established HPSR system with both demand and supply driven systems.

Barriers to public funding for HPSR

According to the respondents, excluding respondents from Thailand, barriers to HPSR funding faced in all countries are similar. These are:

- The scientific community engaged in HPSR research is limited
- Capacity development in HPSR is insufficient
- Calls for research proposals in HPSR are inadequate
- Currently HPSR is not aligned with the priorities of health departments, at both central and state government levels.

Measures to strengthen HPSR funding

Measures mentioned by respondents were similar across all SEAR countries. Common measures suggested were:

- A well-framed health policy document with a vision to maximise the implementation of health research with appropriate prioritisation, coordination and facilitation of ethical health research, which translates into products, policies and programs facilitating good health for all
- The intersectoral (involving health and non-health sectors), harmonised (coordinated effort between central and state authorities) conduct of HPSR without duplication of efforts
- Advanced capacity building programs for HPSR, with support from international partners

- Data repository and data management platforms to synchronise research projects and their outcomes.

The right mix for HPSR funding

Respondents from India suggested funding should be mobilised from within the national health systems as well as from science and technology budgets and international sources. Research priorities to address health system needs and development goals need to be identified in consensus with policy makers. Respondents from Sri Lanka suggested public healthcare should be free for all, through a network of curative and preventive healthcare delivery units. Respondents from Sri Lanka also suggested that funding for HPSR should be not less than 25% of the entire research budget. Respondents from Nepal and Maldives suggested that, since their countries mainly undertook SDG-focused research, there should be an intersectoral approach involving ministries of finance, health, agriculture, education, etc. and other

sectors. Such convergence could be possible through national planning bodies.

Discussion

Our study shows that HPSR struggles to find a place in the priority setting of national health agendas in most SEAR countries. Research activities are mostly directed towards fulfilling universal health coverage and SDG goals in Sri Lanka, Maldives and Nepal, mainly through project specific implementation research. Thailand too focuses on achieving universal health coverage targets, though it has a well-established institution to carry out HPSR activities in the country. India, on the other hand, follows more of a needs-based, program implementation pathway for prioritising and funding research under the label of HPSR.

Among these countries only Thailand has a well-established channel for HPSR funding. Every year, a portion of the budget is set aside for HPSR, with the

Table 1. A summary of key findings from the study countries

Themes	India	Maldives	Nepal	Sri Lanka	Thailand
Decision makers and stakeholders for HPSR budget allocation	a) Department of Health Research b) Indian Council for Medical Research c) Ministry of Health and family welfare	a) Ministry of Health b) National Health Research Council	a) Ministry of Health b) National Planning Commission c) Nepal Health Research Council	a) Ministry of Health b) National Science Foundation c) National Research Council	a) Royal Thai Government b) Ministry of Public Health c) Thailand Research Fund d) National Research Council of Thailand e) Health Systems Research Institute
Priority given to HPSR	Needs-based prioritisation. Focused on clinical and biomedical research	Focused on clinical and biomedical research	Focused on clinical and biomedical research	Evidence-based prioritisation	High priority
Nature of HPSR funding – demand/supply led/mixed	Mixed	Supply led	Supply led	Supply led	Mixed
Sources of HPSR funding	Part of Union Budget allocation ICMR, DBT, CSIR	External funds – multilateral/bilateral organisations, e.g., WHO, USAID	External funds- multilateral/bilateral organisations NHRC	External funds – multilateral/bilateral organisations	Public funding – 80% Private funding – 20%

DBT = Department of Biotechnology; CSIR = Council for Scientific and Industrial Research; HPSR = Health Policy And Systems Research; ICMR = Indian Council of Medical Research; NHRC = Nepal Health Research Council; USAID = United States Agency for International Development; WHO = World Health Organization

government allocating 80% of the funds and external or private funding agencies allocating the remaining 20%. HSRI allocated US\$12 million in 2018 and US\$13 million in 2019 towards HPSR.

Nepal, a small landlocked country in South Asia, is making efforts to establish the structures and mechanisms for evidence-based implementation research and has a budgetary allocation of 2% of its national budget for health research. Most research funds go to monitoring and evaluating service delivery, health workforce assessment, health information systems, access to essential medicines, health financing, health leadership and governance. Capacity building for HPSR and the creation of a well-established HPSR community is given a back seat. Due to funding constraints, researchers tend to follow the agendas of government agencies and take up research projects related to programs connected to the SDGs.

Maldives has recently started looking at health research projects after the establishment of its National Research Committee. The country focuses more on clinical and biomedical research rather than HPSR and does not have dedicated funding for HPSR-related activities. Funding decisions are based on the identified health needs of the country, as determined by the government. Hence projects in line with government priorities receive more funds.

Sri Lanka also struggles to find a proper budget for HPSR because funding is primarily project based. The majority of funds for research come from external sources. Although researchers receive allowances as part of their salary structure, their research is not primarily focused on HPSR and is more clinical in nature.

India follows a needs-based system for health projects and has a policy maker-driven pathway for HPSR. A central body, the ICMR, spends a large proportion of the available funds on clinical and biomedical research. The ICMR's budget is largely allocated to the project-related epidemiology of communicable and noncommunicable diseases, nutrition and health technologies.²⁸

Gaps in a common understanding of HPSR remain across countries, adversely affecting the perceived academic rigour of HPSR outputs among other researchers and policy makers. Robust capacity-building measures, along with framing of guidelines for appropriate conduct and reporting of HPSR, is urgently needed. These require concerted and coordinated efforts by all stakeholders including governments, other funders and the HPSR community. Improving harmonisation between various national institutions involved in HPSR and creation of regional networks are possible ways forward to strengthen HPSR in the region.

In addition, funding is urgently needed to operationalise HPSR. Based on our findings, only Thailand has a channel for annual domestic funding to HPSR. Many national funding agencies have siloed funding streams that do not facilitate multidisciplinary collaborations, which are vital to HPSR. Without having

dedicated funding streams, the goal of increasing national research capacities and long-term sustainability for HPSR will be difficult to achieve.

Our findings also highlight the need to increase the number and availability of HPSR-trained researchers in LMICs. Despite an increase in the absolute number of peer-reviewed research outputs on the health systems and policies of LMICs, most of these publications were led by authors from high income countries.²⁹ A conducive environment must be created to support and nurture interdisciplinary HPSR researchers who are often isolated within departments focused narrowly on select disciplines.

The level of commitment to universal health coverage appears to be a key determinant of the importance accorded to HPSR, even if this is not explicitly stated by policy makers. Among the five countries studied, Thailand exemplifies this, while Kerala and Tamil Nadu illustrate this among the Indian states. As health systems evolve to embody both efficiency and equity as goals, the value of HPSR becomes more apparent to policy makers.

The pursuit of HPSR has hitherto been limited by the objective of assisting the development of 'strong health systems', without clarity on the purpose of that augmented strength. When commitment to health equity becomes clear, with universal health coverage as the vehicle, HPSR can illuminate the path that health systems must follow.³⁰ Without that clarity, efforts to promote HPSR will remain disconnected and directionless.

Conclusion

This study provided a profile of the existing landscape of health research in SEARO member countries and highlighted the determinants of HPSR funding. A common definition and interpretation of HPSR is required, extending beyond geographical and disciplinary boundaries. There is a need to enhance core domestic funding and increase the production and availability of HPSR researchers in the countries studied.

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Competing interests

None declared.

Author contributions

MM and KSR conceptualised the study. MM and AG wrote the first draft and MM, KSR and SS conducted critical reviews of the document and worked on the various iterations. All authors approved the final version of the manuscript.

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