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Bridging Neuroscience Research and Policy: Lessons Learned from the Philippine Brain Research Agenda Setting

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Abstract

The Philippine Council for Health Research and Development (PCHRD), through the Brain and Mental Health R&D Program, led the creation of the Philippine Brain Research Agenda (PBRA) in 2024. Using evidence-based priority-setting frameworks, stakeholder consultations, and a nationwide survey, PBRA identified key brain and mental health research priorities. Bridging neuroscience research to policy and practice in the Philippines requires multisectoral and transdisciplinary collaborations, strong science-policy-society (SPS) linkages, and inclusive governance, ensuring that emerging technology and innovation align with the collective needs of the country while being socially and culturally grounded in the Philippine context.

Neurological diseases such as neurovascular conditions, remain among the leading causes of morbidity and mortality in the Philippines [1]. However, research productivity in this field has been insufficient particularly with the utilization of advanced and emerging technologies [2][3], necessitating urgent attention and investment. In response, the Philippine Council for Health Research and Development (PCHRD), through the Brain and Mental Health R&D Program and in line with its mandate under the Philippine National Health Research System (PNHRS), through the Research Agenda Management Committee (RAMC), spearheaded the creation of the Philippine Brain Research Agenda (PBRA) in 2024 [3]. The aim of PBRA is for the country to expand support for brain and mental health research underscoring the use of advanced and emerging technology contributing to scientific advancements and the sustainability of SDG 3 (Good Health and Well-being) [3].

Research Agenda Setting

Research agenda setting is important in addressing actual needs and gaps in any chosen field to ensure that funding agencies allocate resources and efforts appropriately and efficiently. Developing a research agenda optimizes the effectiveness of research funding, enhances national health research frameworks, and aligns research priorities locally and globally [4]. This is even more relevant for low-middle-income countries such as the Philippines where investments should be carefully made because of financial limitations.

Philippine Brain Research Agenda Setting

The PBRA was developed using a combination of the James Lind Alliance (JLA) framework and the Philippine National Health Research System (PNHRS) Guidelines for Health Research Prioritization. It involved 7 key steps: landscape review, stakeholder consultations, creation of a steering committee, dissemination of an online survey across the regions, participant identification, a priority-setting workshop, and validation. These key steps followed a top-down approach similar to previous agenda-setting conducted by the council [5]. The workshop generated a total of 170 priority topics which were scored and ranked following the PNHRS Research Agenda Setting Guidelines. Major themes identified were *Foundation (Basic) Research for Brain Health, Epidemiology, Clinical Research and Development on Neurological Conditions, Advanced and Emerging Technologies for Brain Health, and Public Health and Other Socially Impactful Strategies for Brain Health.*

Strengths and Weaknesses

Several key strategies contributed to the success of the PBRA setting, particularly multi-stakeholder collaboration. Engaging medical societies such as the Philippine Neurological Association (PNA) and the Philippine Society for Developmental and Behavioral Pediatrics, alongside various Higher Education institutions (HEIs) and key government agencies related to brain health, played a critical role. Stakeholder consultations provided a platform for in-

depth discussions, enabling a comprehensive understanding of existing gaps and needs that R&D can address.

Similarly, the creation of a steering committee from various expertise and not only limited to medical doctors, but also from basic science researchers, neuroscientists, and advanced technologies experts ensured that agenda was holistic, multidisciplinary, and forward-looking.

The strong partnership with these stakeholders provided a crucial avenue for reaching various regions across the country. This collaboration facilitated the dissemination of an online survey designed to identify and scope priority research topics in neuroscience.

The use of an evidence-based priority-setting framework, extensive stakeholder consultations, and a nationwide online survey ensured that the identified research areas effectively addressed the most pressing brain and mental health challenges in the country. These strategies are aligned with the findings of Ranson and Bennett (2009), which highlight that successful priority-setting approaches in health policy and systems research are typically nationwide driven, interpretative, and inclusive of diverse stakeholders [6]. Collectively, these efforts reinforced the PBRA, fostering a research agenda that is comprehensive, impactful, and aligned with both national and global health priorities.

Nonetheless, the PBRA setting was not without its limitations. While a diverse range of stakeholders was engaged, the inclusion of the biotech and health technology industries could have further strengthened the initiative, particularly in facilitating the future commercialization of R&D outputs. Additionally, due to time and budget constraints, an online survey was utilized as an innovative approach to capture regional needs. However, a notable drawback of this method was the lack of data from hard-to-reach regions such as II, VIII, XII, XIII, and BARMM, likely due to challenges in internet connectivity and accessibility.

Role of Science - Policy - Society in Successful Implementation of PBRA

The success of PBRA extends beyond effective research priority setting; its true impact lies in successful implementation. In this regard, the science-policy-society interface play a crucial role in bridging research with actionable policies and societal needs, ensuring that identified priorities translate into meaningful outcomes.

By aligning research efforts and scientific expertise with the Philippine Brain Research Agenda (PBRA), research outputs can more effectively contribute to reducing disease burden and addressing health disparities in brain health. Engaging experts from diverse fields beyond medicine further strengthen the research infrastructure, fostering interdisciplinary innovation.

A key intersection of science and policy lies in expanding access to cutting-edge technologies such as neuroimaging technologies. Biomedical optics tools, such as laser and spectroscopy-based techniques, are driving advancements in the early identification, diagnosis, and monitoring such as of neurovascular conditions [7]. For instance, Raman spectroscopy can provide molecular-level insights into neurodegenerative disorders such as Alzheimer's and Parkinson’s disease, paving the way for earlier detection and targeted interventions.

Funding agencies have a responsibility to ensure that their neuroscience priority areas align with the PBRA. Additionally, continued support and expansion of ongoing initiatives, including linking and learning sessions, will foster interdisciplinary collaboration among researchers. The provision of capacity-building opportunities will also strengthen the research ecosystem. Furthermore, partnerships among funding agencies with key multi-stakeholders, including policy makers are also important in ensuring the translation of R&D outputs from PBRA.

Policy and practice should be backed by the best available scientific evidence, however, the challenge lies in the inherent complexity and unpredictability of the interlinkages between health, technology, and innovation.

Society plays a vital role in the success of PBRA by fostering public awareness, reducing stigma, and ensuring research aligns with societal needs. Public engagement through education and advocacy enhances research relevance, and encourages policy support.

Partnerships with civil society particularly with patient advoacy groups and NGOs, help translate reserach into real-world applications.

The research agenda-setting gives direction and fosters synergy across multiple disciplines, sectors and levels. To effectively translate neuroscience research into policy and practice, it is crucial to engage all relevant stakeholders, from problem identification to implementation of solutions.

Policy recommendations/conclusions

Bridging neuroscience research to policy and practice in the Philippines requires strategic approaches that foster multisectoral collaboration across discipines, strengthening science-policy-society (SPS) linkages and promoting inclusive governance in health research agenda setting.

1. Responsive funding mechanisms across the research cycle to support is critical from needs assessment, research agenda setting until implementation, utilization, scale-up and dissemination.
2. There is a need to develop a common language across disciplines. The field of neuroscience research is inter-, multi-, and transdisciplinary, therefore, having standard definitions and language enhances collaboration and coherence among researchers, decision-makers, and end users.
3. Strengthening support for champions to bridge the SPS spaces will help facilitate a smoother transition into policy and practice. In an article by Jagannathan et al., experts highlighted the critical need for intermediaries that bridge the functional divide between science and decision-making, ensuring that policy and practice are science-based [8].
4. Promote comprehensive stakeholder engagement in the Research Agenda setting by institutionalizing participatory approaches that involve researchers, decision-makers and affected communities in shaping health research priorities. Moreover, there is a need to integrate a governance lens into the RA setting to ensure inclusive and transparent decision-making [9].
5. Implementing iterative feedback mechanisms and promoting agile processes that adapt to technological advancements and emerging technologies.
6. More importantly, ensure that the feedback mechanisms are socially and culturally grounded, enhancing the integration of neuroscience research into policy and practice.

These recommendations emphasize the need for a structured yet flexible approach that supports innovation and technological advancements in health and is grounded and informed by the social dynamics and cultural contexts of the Filipino people.

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