Brain research agenda setting and its role in promoting advanced technologies in a developing country: The Philippine experience

Jimenez, Sarah Jane A[1,2], Austria JJZ[1], Celebrado JCR[1], Tuballa MHIA[1], Bungalon KJP[1]

[1]Department of Science and Technology - Philippine Council for Health Research and Development, Metro Manila, Philippines, [2]Department of Science and Technology – Science and Technology Fellows Program, Metro Manila, Philippines

ABSTRACT

Introduction: Cerebrovascular diseases are one of the leading morbidities and mortalities in the Philippines, a developing country known to have a triple burden of diseases (communicable, non-communicable, and injury). Despite this pressing health concern, the local advancements in neuroscience research, particularly innovations using advanced technologies, progress at a slow rate. One of the identified problems is the lack of a robust health research agenda encompassing neuroscience. Health research agenda setting is crucial for developing countries with limited resources as it ensures that: 1) actual needs and gaps in the selected area are addressed, 2) funds and efforts are properly allocated to maximize the efficiency and effectiveness of research investments, and 3) research priorities are harmonised across multiple stakeholders. Health research agenda also plays a role in steering the trajectory of science and technology in health research, such as in promoting the use of advanced technologies in research and development (R&D).To enhance neuroscience efforts in the Philippines, the Department of Science and Technology (DOST) – Philippine Council for Health Research and Development (PCHRD), as the national coordinating body for health research, initiated the development of the first Philippine Brain Research Agenda Setting that focuses on neuroscience research with the integration of advanced technologies. **Materials and Methods:** This study was conducted in two (2) parts. Part 1 involved the scoping of ongoing neuroscience research through landscape review and stakeholders' consultation with different government agencies, neuroscience centres, and higher education institutes that are involved in neuroscience R&D. Part 2 encompassed the actual research agenda setting which adhered to the Philippine National Health Research Systems (PNHRS) Agenda Setting Method. The methodology included an online survey across the 17 regions of the Philippines, and a face-to-face two-day round table discussion on prioritization, scoring, and ranking of research topics. The participants were neurologists, neuroscientists, psychiatrists, developmental paediatricians, molecular biologists, physicists, engineers, and advanced technology experts. **Results:** The online survey was deployed to 14 out of 17 regions of the country. A total of 86 respondents with diverse neuroscience expertise answered the survey, the majority (55.8%) of which are neurologists. A total of 170 priority topics were identified, which were discussed and ranked during the two-day face-to-face round table discussions. Figure 1 below shows the overview results of the agenda setting. **Conclusion:** Results from this agenda-setting activity highlighted the limited scope of neurosciences R&D in the Philippines and the limited application of emerging technology in the neurosciences. Despite this, the activity identified several experts who are willing to contribute to neuroscience research, given the appropriate support and resources. The Philippine Brain Research Agenda Setting is expected to increase the neuroscience research in the country which will not only contribute new knowledge to the field but also foster local and international collaboration. Most importantly, it will address the needs of the Filipino people in the different aspects of neurology.