



THE AGA KHAN UNIVERSITY



Brain & Mind Institute
from neuron to neighbourhood

Brain & Mind Institute

IMPACT REPORT 2022

From neuron to
neighbourhood





Brain & Mind Institute's Team

VISION

Healthy Brain, Healthy
World

MISSION

We are advancing brain health through
collaborative Research, Education, and Innovation
in Mental Health and Neuroscience



Impact at a glance

Message from the Founding Director

Through diversity of research approaches, we dedicate ourselves at the Brain and Mind Institute, to bettering the lives of people who are affected by pressing mental and brain health problems. Whether we are uncovering the causes of illness or advancing breakthrough research into treatments or interventions, building the capacities of health professionals, community organizations, or individuals and their families, we are always mindful of the local needs of the people and communities at risk.

The past year has been one of an ambitious vision of inspiring hope and developing cutting-edge solutions. We intend to continue our uncompromising approach of enhancing one's potential to heal and be healed, promoting and fostering good mental well-being for all.

In keeping with our "big tent" ethos, we collaborate across borders and disciplines in pursuit of knowledge and excellence. We envision bringing about change through implementation science and a real-world ecosystem, focusing on critical mental health conditions within communities of the global south.

Our team is co-creating a strategic framework to advance science from the "neuron" to the "community." This "living lab" approach aspires to develop effective and holistic strategies to improve access to care, prevent ill health, and promote improved mental and brain health in the global south communities. This will be achieved through innovative, interdisciplinary and culturally sensitive solutions.

Our success in face of immense challenges during the initial two years has in large part been due to the support of our donors, AKU leadership and community, and the dedication and commitment of our staff. We are grateful for all your continued support for our collective vision.

Prof Zul Merali



“ We intend to continue our uncompromising approach of enhancing one's potential to heal and be healed, promoting and fostering good mental well-being for all

Message from the Associate Director

The Brain and Mind Institute (BMI) at AKU represents the latest iteration of thinking around brain and mental health, and over the past couple of years we have made tremendous efforts to set up teams that will lead in developing new ideas and solutions on the continent and globally. Establishment of this institute is a demonstration of the AKU commitment to tackle relevant problems in our geographies, and to do so with an eye also on quality, impact and access.

From the outset we have identified issues around depression and suicidality, trauma and posttraumatic syndromes, and healthy aging as among some of the most important areas for generation of new knowledge and intervention, and we are convinced that the work our teams are carrying out in these areas will change the practice and policy landscape across many geographies.

We have also engaged in advocacy activities, initially centring on decriminalization of suicide and then broadening to mental health advocacy in general, including developing short courses for mental health literacy in the general population. We have had meetings with legislators to help change the legislative environment and make it friendlier to people living with mental illnesses, we have engaged the judiciary and encouraged them to strike our sections of the law that diminish the dignity of people living with mental illnesses, and to consult more with mental health professionals before making potentially harmful decisions where mental ill health is concerned.

The partnership between BMI and the AKU Medical Colleges in East Africa and in Karachi ensures not only that our faculty are involved in BMI activities including research, innovation and advocacy, but also that the content we teach our students is informed by the latest evidence-informed best practices.

As we look confidently into the future, we are certain that we will have more opportunities to collaborate, to innovate, and to change the global mental health landscape for the better!

Prof Lukoye Atwoli



HIGHLIGHTS AND ACCOMPLISHMENTS

1. Implementation Science Team: Building Capacity

BMI is bringing change through implementation (or delivery) science. BMI's [Implementation Science Team](#) consists of over 25 prominent researchers and practitioners, with exciting and multidisciplinary skill sets, including expertise in psychiatry, psychology, neuroscience, social and medical anthropology, mental health, suicide prevention, health economics, data science, public policy, and instructional design. This team is moving science from the 'bench' to the 'community' (as per BMI's ethos of 'from neuron to the neighborhood'). We are identifying gaps in service and/or knowledge, while developing effective strategies to help improve access to care and overcoming disparities. This is being achieved through innovative, culturally sensitive solutions, engaging interdisciplinary teams (at the community level) to build action networks, while disseminating findings to communities and stakeholders for maximum impact.



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2. Education: Addressing Knowledge and Intervention Gaps

Awareness building and defeating stigma: mental health ambassadorship course

In order to address the knowledge gap, BMI launched the Mental Health Micro-Certification Course to raise awareness about mental health. Participants learn to recognize mental illness in people around them, to respond empathetically and non-judgementally, resulting in early detection and reduced stigma. As a result, more people will likely seek treatment or support those suffering in silence, in an environment with less stigma and better understanding. This course was piloted in September 2022, and deployed an innovative engagement strategy that included a webinar series and module facilitation, culminating in peer discussion sessions. The objective is to mobilize groups of advocates or champions for mental health, who will strive to eliminate stigma and identify and support those in need while promoting mental well-being for all.



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Capacity strengthening in the global south: partnership with Harvard Medical School

Starting in 2023, we hope to select one fellow from South or Central Asia and one from East Africa to spend a year at Harvard Medical School, with the expectation that the following year they will come to geographies served by AKU or AKDN, to implement global mental health research initiatives. We intend to select two people every year for the next five years.

Training healthcare workers

Improving general mental health diagnostic skills as well as mental health intervention capacity for vulnerable populations including mothers is integral to the work we do. In collaboration with the Aga Khan Health Services, Pakistan, BMI facilitated a training on WHO Mental Health Gap Action and Thinking Healthy Program. The training was offered to 30 health care workers from Gilgit and Chitral.

Harvard Medical School and Aga Khan University

Global Mental Health Postdoctoral Fellowship

3. Research: Moving Science from the Neuron to the Neighbourhood

UZIMA: Utilizing health information for meaningful impact

BMI is focused on building data science capability across the research pipeline, from discovery research to translation of research into care (implementation science).

The Institute is a major partner with Michigan University and the Institute of Human Development at AKU in an NIH U-54 grant financing new data science capabilities to understand the prevalence of mental health disorders among adolescents and young adults in Kenya. The project involves developing predictive analytic models to facilitate the identification of modifiable risk and protective factors and treatment strategies. We have disseminated our initial findings in two posters presented at the Africa Data science and Innovation (DS-I) Consortium meeting held between October 28 – November 03, 2022, in Cape Town, South Africa.

Using technology to bring mental health to the community's doorstep: The mPareshan approach

Badin district of Pakistan has for a long time experienced lack of access to professional mental health care, due to the scarcity of psychologists and psychiatrists in that region.

To address this, BMI in collaboration with the department of Community Health Sciences, has pioneered an alternate approach whereby the more easily available Lady Health Workers (LHWs) are trained and deployed. More specifically, the LHWs were empowered to screen, detect and support those expressing symptoms of mental distress, through specialized training and



(L to R): Sanya Maraj, mPareshan Project Associate; Dr Fauziah Rabbani, Professor, BMI & CHS and Principal Investigator project m Pareshan; Dr Azra Fazal Pechuho, Minister of Health and Population Welfare Sindh, Pakistan; and Mr Qasim Siraj Soomro, Parliamentary Secretary Health, Sindh during the endorsement and approval of the mPareshan training manual for roll out in Sindh.

guidance through an app called mPareshan. Through this approach, Dr Fauziah Rabbani and her team, championed the delivery of mental health services to the community's doorstep. This project involved a pilot study in the use of community health workers to identify at-risk individuals and offer direct support and upstream interventions in accordance with the stepped-care model.

This 'light touch' intervention by LHWs, using the mPareshan app, resulted in a remarkable reduction in anxiety and depression scores of more than 50% of participants over a short duration of six months. A customized training manual adapted from WHO has been developed by the mPareshan Project in English and translated into Urdu and Sindhi for inclusion in the LHW program curriculum. This approach will eventually be deployed in many other low resource settings in East Africa as well as South and Central Asia, where there is little to no access to mental health care.

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This project involves a pilot study in the use of community health workers to identify at-risk individuals and offer upstream interventions in accordance with the stepped-care model. (See framework for strategic action pg.17)



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Towards suicide prevention: Establishment of self-harm registry

Self-harm and suicidal acts are strongly linked to mental illnesses and are of significant concern in Kenya and Pakistan. As part of BMI's efforts to understand the mental health status of the Aga Khan Hospital's patients and to help build a local and national Self-Harm Registry, we will deploy AKU's new Meditech Electronic Health Records (EHR) system.

We are in the final stages of initiating the use of screening tools for depression and suicidal ideation embedded into the new EHR system. Such integration, continuous monitoring, and assessment, is a pilot project that we intend to expand to other Kenyan hospitals and potentially contribute to development of a National Self-harm Registry in partnership with Kenya's Ministry of Health, Division of Mental Health.



Open conversations about suicide: Film screening in Pakistan

Our pursuit of establishing a Suicide Prevention Research and Interventions Centre continues. In September 2022, we hosted [screening of the film](#) "Darya Kay Iss Paar" (This Bank of The River) at the Aga Khan University Campus in Karachi. The film, produced by Nighat Akbar Shah, illustrates a newfound willingness in Pakistan to break the silence and take action to prevent suicide.

The film showcase was followed by a panel discussion with AKU experts in the field, university and community leaders, people with lived experience and the film producer who emphasized the need to recognize that suicide is preventable.



Alzheimer's disease and other Dementias

Alzheimer's disease and other forms of dementia are projected to be the next pandemic. To date, however, 90% of the world's population has been excluded from research on Alzheimer's disease, as most of the studies have been conducted on white populations (of Western European ancestry) in the United States and Europe. In response, we forged a partnership with [Davos Alzheimer's Collaborative](#), to address the huge need in Sub-Saharan Africa, in general, and in Kenya in particular. We are establishing a Dementia Hub to promote Alzheimer's research, enhance culturally sensitive detection methods and care, and to broaden access to innovative treatments across the African continent.

This partnership is a trailblazing collaboration to redefine Alzheimer's screening and diagnostics, biomarker development for early detection, and the development of innovative, preventive and treatment interventions.

Publications: Contribution to science

The BMI Implementation Science Team has contributed to scientific knowledge through peer reviewed publications, with over 40 publications to date ([available here](#)). These are mainly within BMI's priority research themes encompassing 1) suicide prevention, 2) depression and anxiety, and 3) stress & trauma.



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4. Engagement: Forging Meaningful Connections with the Community

African launch of Lancet-World Psychiatric Association Commission on Depression: Time for united action on depression

Some of the key priority areas for the BMI are depression and suicide prevention (both highly correlated). Following the global launch of the [Lancet-World Psychiatric Association Commission on Depression](#), BMI was privileged to host the subsequent [African launch](#) in collaboration with the Lancet and World Psychiatric Association. This launch was significant, as depression carries the largest burden of illness across various low- and middle-income countries.

The Lancet Commission's and BMI's aims are aligned towards promoting concerted and united action to reduce the burden of depression globally. The BMI will focus more specifically on geographies and populations served by the Aga Khan University and the Aga Khan Development Network. For details see the [Lancet Commission Report](#).

“ BMI was privileged to host the African launch in collaboration with the Lancet and World Psychiatric Association. This launch was significant, as depression carries the largest burden of illness across the African continent



Championing access to mental health care: Insurance stakeholder's forum

Kenya has made steady progress in providing mental health services to its population, but some areas require more work. BMI in partnership with the Mental Health Alliance of Kenya (MHAK), hosted a consultative forum with stakeholders, including insurance companies, regulators, policyholders, private sector, academia, government and non-profit organizations, for a roundtable discussion on how to improve efficiency in the insurance sector concerning access to mental health care.

The forum was meant to promote the efficiency and effectiveness of claim resolutions for users of psychiatric services and to review the state of insurance regarding mental health services in Kenya. The stakeholders were very appreciative of BMI's leadership role in bringing various stakeholders together, to explore avenues to bridge the gap between policy and practice and carry out comparative best practices studies.

Self Injury Awareness: A workshop for people with lived experiences

People who have had firsthand experience with suicide play an essential role in suicide prevention. In March 2022, BMI facilitated an engaging workshop for people with lived experiences and mental health experts. This coincided with annual Self-Injury Awareness Day.

Suicide prevention initiatives benefit significantly from the perspectives of people who have lived through the experience. Personal understanding and knowledge of their journey can inform the design of prevention planning, treatment, and education and lead to improved care and safety to reduce suicidal ideation (thoughts and feelings of suicide) and deaths. In addition, those who have lived experience can offer hope and resilience to those who are suicidal and support those in recovery.



Suicide prevention initiatives benefit significantly from the perspectives of people who have lived through the experience



A roundtable discussion on fatherhood and mental health

Socio-cultural norms have a significant role to play in men's or fathers' help-seeking behaviour in recognition of their mental health. These norms contribute to their inability to expose their vulnerability in front of their families and society in general; often contributing to fragile relationships – with men having nowhere to go to discuss their concerns openly.

In June 2022, we hosted [a roundtable discussion](#) that included religious leaders, mental health experts and persons with lived experience who talked about the need for training and mental health support for men.

The hybrid event attracted over 350 attendees both virtually (global participants) and in-person at the University Centre in Nairobi, Kenya.

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5. Partnerships: The 'Big Tent' Philosophy in Action

We collaborate across borders and disciplines in pursuit of improved mental and brain health. We envision bringing about change through implementation science and a real-world ecosystem, focusing on critical mental health conditions within communities in the global south.

Collaboration with partners takes many forms, but **Memoranda of Understanding (MOU)** signal a formal level of commitment to work together, and BMI is signatory to eight such agreements to date:

- Together with [Harvard University's Global Mental Health Institute](#), BMI has launched a joint [Post-Doctoral Fellowship Program in Global Mental Health](#).
- The Institute signed an MOU with [Taskeen](#), a mental health-focused NGO that conducts community-based advocacy and provides counselling services in Pakistan, founded by an AKU Medical College graduate.
- To improve mental health awareness, the Institute formally signed an MoU with [Befrienders Kenya](#), an organization which provides community-based crises support, and focuses on suicide prevention and stigmatization. The partnership will see the two entities strengthen information systems, evidence-supported interventions, and research needs for mental health.
- An agreement with the [Davos Alzheimer's Collaborative](#) supports research on mental health and healthy brain aging.



(Standing L to R): Prof Lukoye Atwoli, BMI's Associate Director and Dean, AKU Medical College; Dr Carl Amrhein, Provost & Vice President, Academic, AKU; and Ms Peninah Mwangi, Befrienders Kenya; Seated: Prof Zul Merali, BMI's Founding Director; Ms Merab Mulindi, Befrienders Director, during the MoU signing at AKU.



(L to R) Mr Brian Odhiambo, Research & Grants Manager, and Amisa Rashid, Executive Director, (both from Nivishe Foundation) and Prof Zul Merali, BMI's Founding Director during the signing of the MoU at AKU.

- Together with AKU's Cancer Centre, the Institute is partnering with **Princess Margaret Cancer Centre** and the [University Health Network](#) in Toronto to study the connects between cancer and mental health.
- In a partnership with [Futbol Mas](#), a global network of social enterprises that link sports and social networking with healthy youth development, the Institute is conducting baseline and benchmarking studies to understand the impact of this community-based intervention on mental health outcomes and resilience building. Currently studies are being conducted in Kenya and Mozambique; with plans to expand into Tanzania (Arusha) and Pakistan.
- In partnership with [Health\[e\]Foundation](#) the Institute will strengthen digital knowledge and education for increased awareness through integrating mental and neuroscience focus.
- [Nivishe Foundation](#) and BMI's unique partnership will enhance mental health care within Kibera, the largest informal settlement in Kenya. Nivishe Foundation is a women and youth-led organisation whose mission is to promote a paradigm shift in how mental well-being correlates to the quality of life and provide individuals with essential technical know-how and resources to improve their mental health.



The Fútbol Más and AKU's Brain & Mind institute and Centre of Excellence in Women & Child Health during the signing of the partnership at AKU. The event was graced by Dr Carl Amrhein, Provost & Vice President, Academic (seated far left).

(L to R): Dr. Mansoor Saleh, the Founding Director of the Aga Khan University's Cancer Centre, Dr. Keith Stewart, Vice President, Cancer and Director of the Princess Margaret Cancer Program at UHN, and Dr. Zul Merali, Founding Director, Brain and Mind Institute, during the announcement of the partnership. (Photo: UHN)

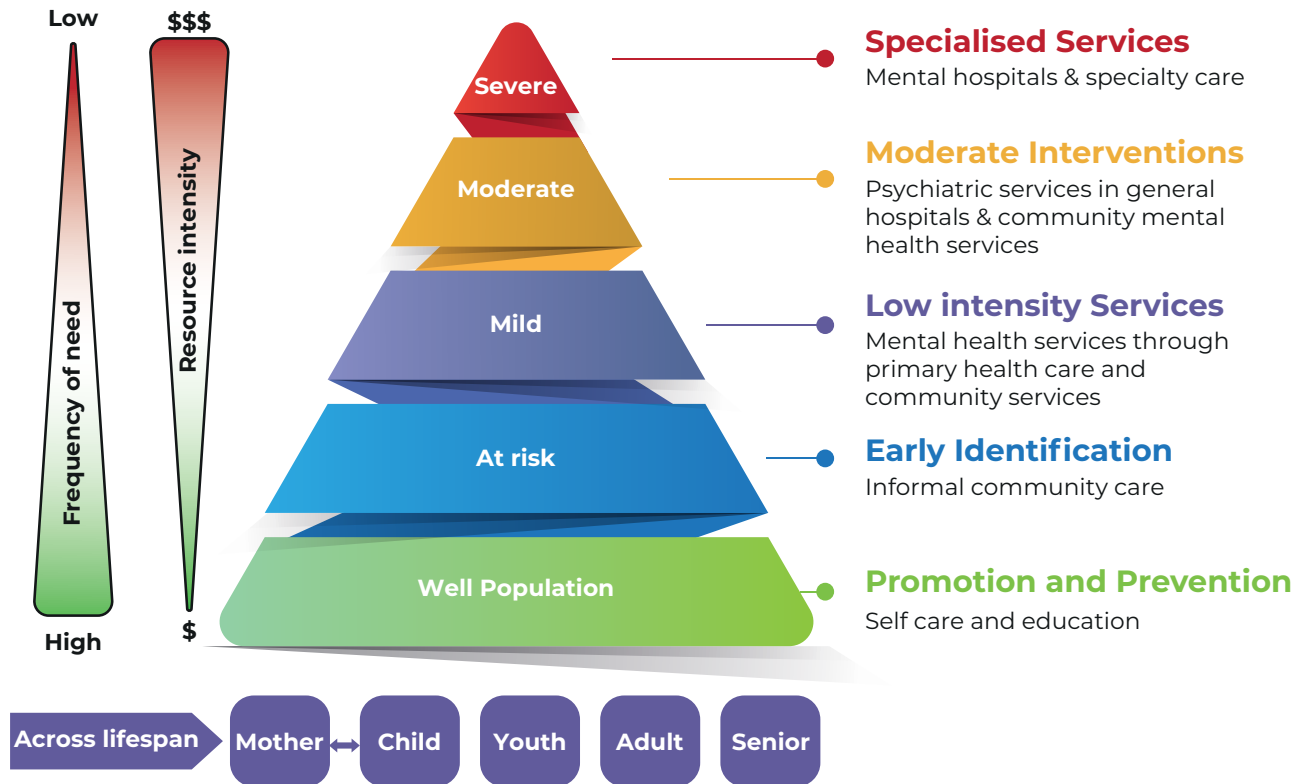


6. Framework for Strategic Action: A Paradigm Shift

Mental health framework

The traditional models of care (developed in Europe and North America) are not viable in resource strained settings where AKU and AKDN operate, where there is a dearth of psychiatrists and psychologists. The BMI has developed AKU's first ever "[integrated mental health framework](#)" that promotes a stepped care (or integrated care) approach, focused on entire continuum of care, ranging from those acutely ill, to those in need of preventive interventions or less-intense levels of care; from those relatively 'well' or 'at risk' to those 'moderately ill' or 'acutely ill', deploying the whole cadre of service providers, including community health workers

This evidence-based, stepped-care model offers a perspective of investing in the relatively well population to promote resiliency and supporting those at risk, and moving up to early detection and intervention and finally for those acutely ill, needing specialized care. This systematic approach for stakeholders will facilitate prioritization and coordination of investments in research, programs and community-based support for mental health and well-being, more suited to low- and middle-income settings.



Conclusion

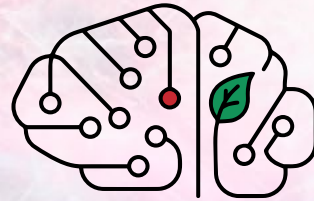
At the BMI we are committed to foster and promote brain and mental health for all. According to the WHO, at least one in every four of us will be directly affected by mental illness over our lifetime. For far too long, those affected, and their loved ones have suffered silently in the shadows of stigma and fear.

The BMI intends to do everything necessary to encourage open dialogue about mental and brain health, while fostering cutting-edge research and innovation to transform how we understand (through research) and manage mental illness. We would like to thank our many partners and collaborators, as we could not have such success without the help from our academic affiliates, institutions, funders, community organisations, and government agencies, among others. We look forward with more faith and confidence to achieve more of the 'impossible' together. So, here's to a better and healthier mental and brain health for everyone, always!



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The Institute's logo symbolizes the interconnectedness of internal brain circuits and external communities; the leaf signifies growth mindset (brain plasticity); hence from neuron to neighbourhood.

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