



OPPORTUNITY

4

SCOPE WITHIN REACH

UNCERTAINTIES

Technology, Values

MEGATRENDS

Advanced Health and Nutrition

TRENDS

Artificial Intelligence
Cross-sectoral Partnerships
HealthTech
Mental Health
Mobilising Innovation

SECTORS IMPACTED

Communication Technologies & Systems
Data Science, AI & Machine Learning
Digital Goods & Services
Government Services
Health & Healthcare
Insurance & Reinsurance
Professional Services

What if AI in mental health was empathetic and culturally informed?

MENTAL AI

Multidisciplinary teams advance AI in mental health through benchmark datasets that incorporate empathy and diverse cultural perspectives, laying the foundation for toolkits for AI in mental health and algorithm validation.





WHY IT MATTERS TODAY



Globally,

1 in 8

**individuals have
a mental health disorder**



including

1 in 5

adolescents

In 2001, it was estimated that a quarter of the world's population would experience mental or neurological disorders during their lifetime.²⁴⁷ By 2023, that estimation doubled to half the world's population.²⁴⁸ Despite this increase, only 2.1% of government health expenditure is allocated to mental health,²⁴⁹ limiting access to affordable mental health services,²⁵⁰ a situation made worse by people's reluctance to seek help because of stigma and perceived discrimination.²⁵¹

Globally, one in eight individuals have a mental health disorder.²⁵² This includes one in five adolescents,²⁵³ influenced by various social, familial, and individual factors and whose developing brains are particularly vulnerable to external influences like violence, poverty, stigma, and technology use.²⁵⁴ Untreated, these mental health conditions often continue into adulthood.²⁵⁵

Telehealth, introduced in the 1990s, has been valuable in treating depression and anxiety.²⁵⁶ The COVID-19 pandemic shifted 36% of mental health treatments to telehealth, leading to increased investments and associated regulatory changes²⁵⁷ despite challenges such as quality of care and therapist shortages.²⁵⁸

AI in mental health is a promising area of advancement,²⁵⁹ potentially disseminating high-quality clinical knowledge worldwide, facilitating cross-cultural psychiatry, improving global mental health,²⁶⁰ and advancing diagnostics, data analysis, and patient monitoring.²⁶¹ The future of mental health could see AI and human practitioners working together, leveraging AI's efficiency and the empathy of humans.²⁶²

Today, examples of AI in mental health include applications that use natural language processing to detect changes in language that correlate with mental health issues and chatbots – such as Woebot – that adapt to user personalities and can talk users through a variety of therapies and talking exercises.²⁶³ Generative AI (GenAI) has also been used in mental health counselling but the focus has been on ensuring that outputs are grammatically and syntactically correct,²⁶⁴ and responses still lack the necessary depth of understanding and counselling.²⁶⁵



OPPORTUNITY

A multidisciplinary team of AI researchers, clinical psychologists, software developers, and data scientists work on designing benchmark datasets²⁶⁶ with empirical analysis, solid theoretical underpinnings, and experiences in clinical psychology that also integrate diverse cultural perspectives.²⁶⁷ These datasets lay the groundwork for the application of a universal toolkit for AI in mental health enhancing mental healthcare globally across different cultures and cultural world views beyond the biases of the developers or the training data for the models.²⁶⁸

BENEFITS

Enhanced validation and assessment of AI in mental health improving access, and assurance, to good quality services in mental health.

RISKS

Overusing AI for mental health leads to loss of aspects of human interactions considered core components of mental healthcare provision, such as empathy and trust.²⁶⁹ Despite validation, solutions for AI in mental health do not deliver on expected benefits, with humans outperforming AI in diagnosis and treatment.²⁷⁰ Reliance on a limited amount of objective data and on retrospective studies²⁷¹ fails to meaningfully advance AI in mental health and reflect the complexity of mental disorders. Potential risk for privacy breaches and data security.

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Estimate of the percentage
of the world population that
would **experience mental or
neurological disorders during
their lifetime**

25%

2023

50%

2100