

Innovation Lecture V: Mental Health Innovation

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January 6, 2021

Introduction

- Mental health and substance use disorders affect 13% of the world's population ([Global Burden of Disease, 2018](#)).
- Mental illness comprises two categories—those with **any mental illness (AMI)** and those with **serious mental illness (SMI)**.
- AMI: mental, emotional, or behavioural health disorder.
- SMI: A person with an AMI is defined as having an SMI if their disorder substantially interferes with or limits one or more major life activities.
- Examples of Mental Health Conditions:
 - Anxiety
 - Depression
 - Substance use disorders
 - Bipolar Disorder
 - Schizophrenia
 - Eating disorders
 - Obsessive Compulsive Disorder
 - Post-traumatic stress disorder
- Making Mental Health a Global Development Priority

How common is mental illness?

- Mental illness affects more females (11.9%) than males (9.3%).
- Anxiety affects 284 million people in the world. [Source](#)
- Depression affects 264 million people. [Source](#)
- The mortality rate of those with mental disorders is significantly higher than the general population, with a median life expectancy loss of 10.1 years. (JAMA Psychiatry, 2015)
- It is estimated mental disorders are attributable to 14.3% of deaths worldwide, or approximately 8 million deaths each year. (JAMA Psychiatry, 2015)

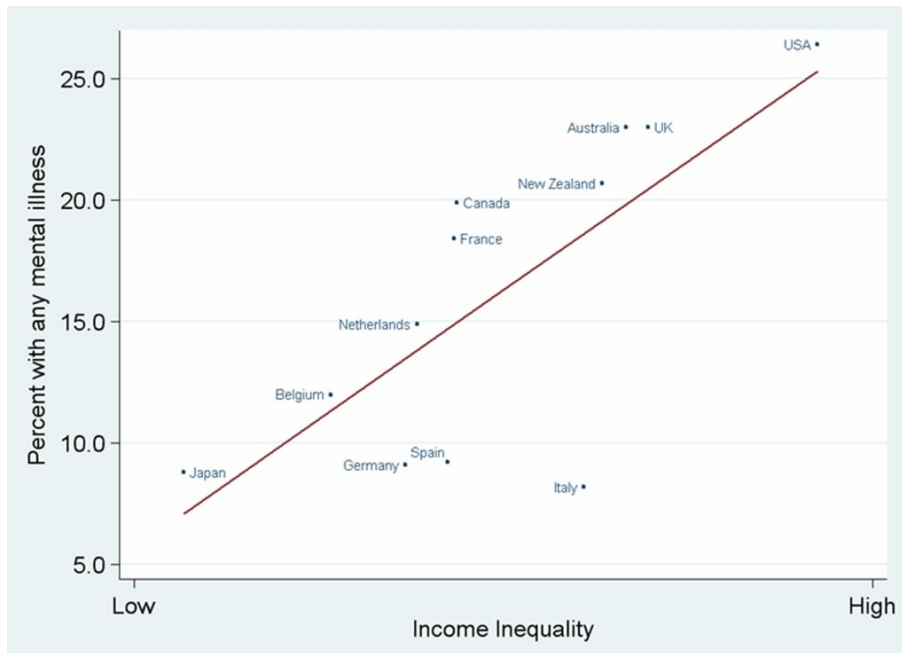
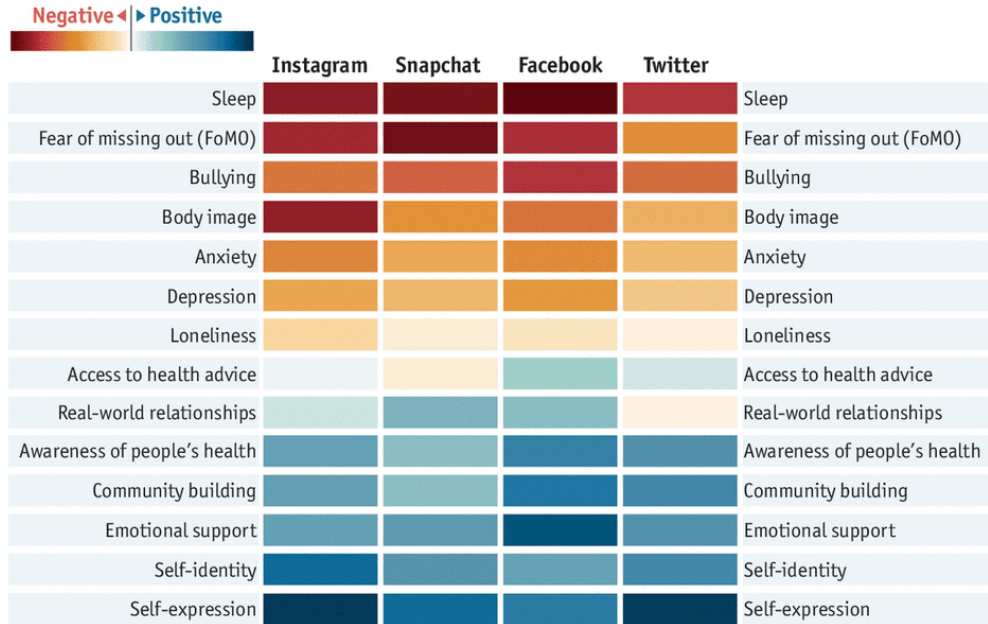


Figure 2: Source: Wikipedia

What its like to have a Mental Illness

Like, obsessed

Britain, social media users, 14- to 24-years-old, reported impact on well-being, 2017



Source: Royal Society for Public Health

Economist.com

Figure 3: Source

Some Ideas for Discussion

- Rationale: Constant exposure to negative news, comments and online content is getting us down.
- Health services aren't keeping pace.
- Moodrise: designed to brighten one's day. Choose the mood. The app feeds mental health expert approved photos, videos and other online content to improve "your experience on planet Earth ". [Video](#).
- Campaign Against Living Miserably (CALM). Large, interactive digital displays that resemble smartphones.
- The screens' purpose is to show how frequent the CALM helpline receives calls.
- It is a type of **bold awareness campaign**.



Spill App

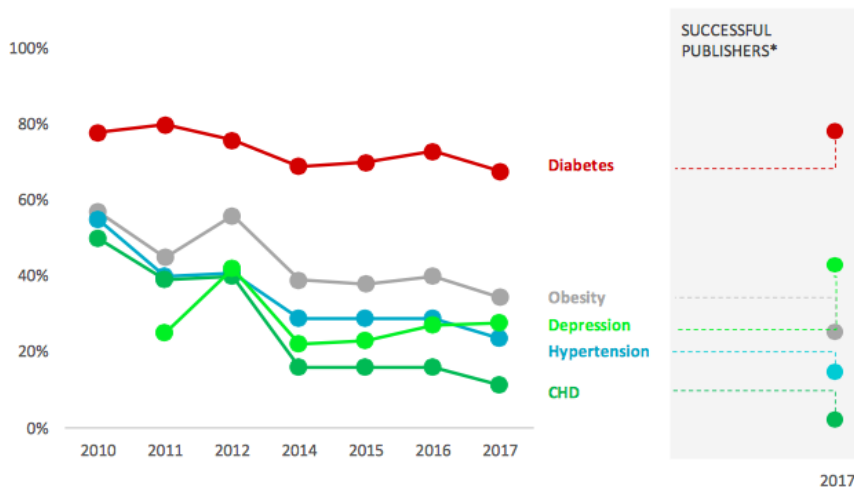
- APP OFFERS FREE MENTAL HEALTH COUNSELLING ANYWHERE, ANYTIME
- How was it born?
- Frustrations with existing barriers to both public- and private-sector options for mental wellness.
- Like: Months' long NHS waiting list to see a counsellor, or paying upwards of EURO 70 per session in order to see a private therapist.
- Users can connect with BACP (British Association for Counselling and Psychotherapy) registered or equivalent counsellors and psychotherapists using anonymous written therapeutic communication – thereby offering private, discreet, convenient, accessible and flexible well-being support for individuals.
- The company works with employers, workplaces or universities to make its app available to employees, individuals and students for free and as a workplace or student benefit.
- More of a consumer app than medical one to reduce stigma.
- *"Our aim is to make 'Spilling' about your feelings a commonplace habit, regardless of whether people are doing it to approach challenges at work, overcome a life problem, navigate the in's and out's of a relationship, or just become a better and more self-aware human overall,"* added co-founder Gavin Dhesi.

Some questions

- Deluge of mobile apps for mental health.
- How is one different from another?
- How to ensure focused targetting of the issues of people?

DIABETES REMAINS THE LEADING THERAPY FIELD FOR mHEALTH SOLUTIONS; DEPRESSION AS FIELD FOR mHEALTH ON A STEADY RISE

Therapy fields with the best market potential for mHealth in the next 5 years



Note: Study wasn't conducted in 2013.

*Successful publishers = >1M USD revenue and max 500 employees



Source: Research2Guidance - mHealth App Developer Economics study 2017 - n = 2,400

Other innovations

- AI based Clinical Decision Support System (CDSS) for early detection of mental health problems. eg. Clarigent health.
- **Moodpath**: a daily mental health companion. Evaluates person's well being on daily basis asking questions and searching for symptoms of depression.
- Results can be used for consultation with a healthcare professional.
- **Meditopia**: Meditation app with aim to reduce stress, assist in sleeping and promote calmness in body and mind.
- Emotion-sensing band.
- Current trends in App Development:
 - Self-Management Apps
 - Apps for Improving Thinking Skills
 - Illness management, supported care
 - Passive symptom tracking
 - Data collection

Technology and Mental Health

- Advantages of mobile care include:
 - Convenience: Anytime, any place treatment available.
 - Anonymity
 - Introduction to care
 - Lower cost: Apps are free or cost less than traditional care.
 - Service to more people including in times of mental health crisis. Eg. Covid pandemic.
 - 24-hour service
 - Objective data collection facilitating evidence-based care.
- Issues in mobile care:
 - Effectiveness: Evidence related to their effectiveness and comparability with traditional methods.
 - For whom and for what: Whether or not the apps are suitable for all people and for all mental health conditions.
 - Privacy: Sensitivity of the personal information.
 - Overselling: Danger of promising more than what is delivered.
 - Regulation: Related to mental health technology and data generated.

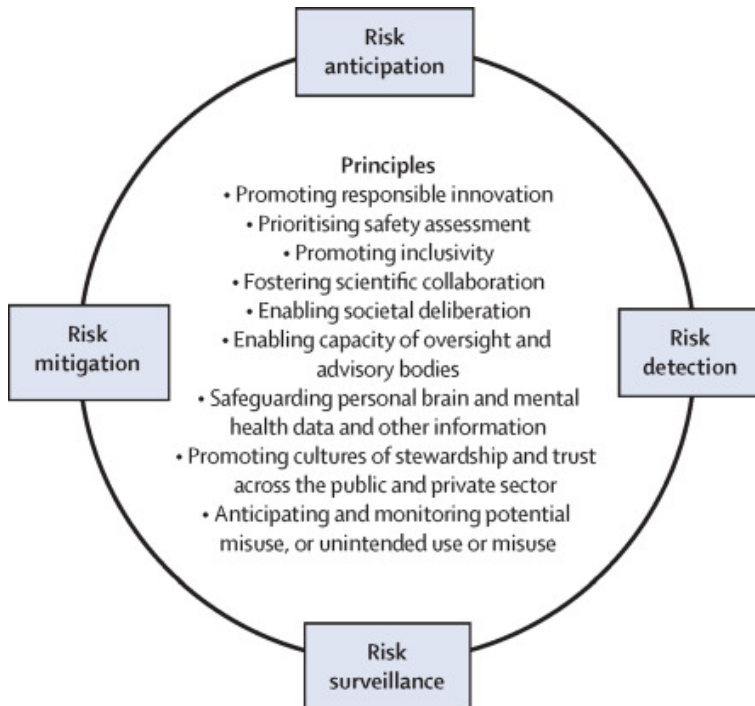


Figure 4: Actions and principles of responsible innovation in mental health. [Source](#)

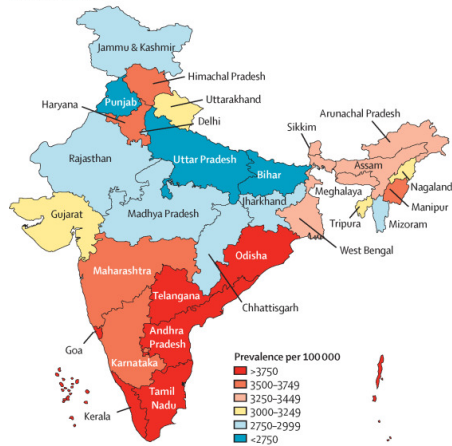
Indian Scenario

- In 2017, 197.3 million people had mental disorders in India.
- 45.7 million with depressive disorders and 44.9 million with anxiety disorders.

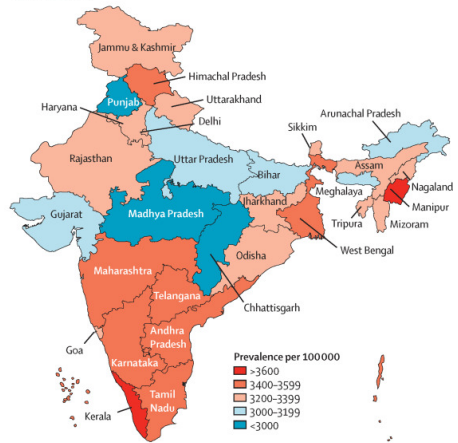
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- Correlation between the prevalence of depressive disorders and suicide death rate at the state level.
- We look at trends using data in the following slides.

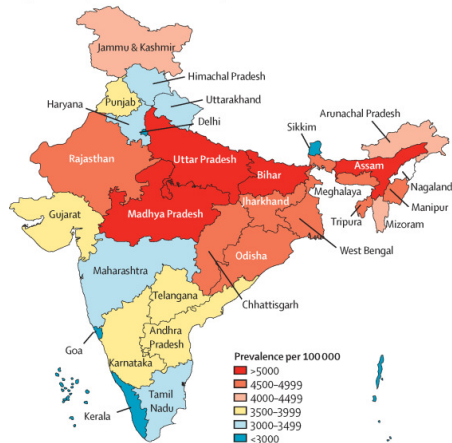
Depressive disorders



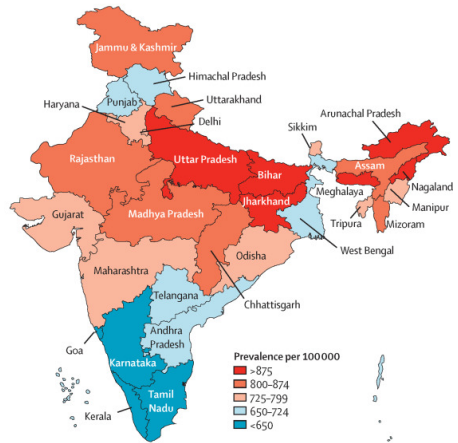
Anxiety disorders

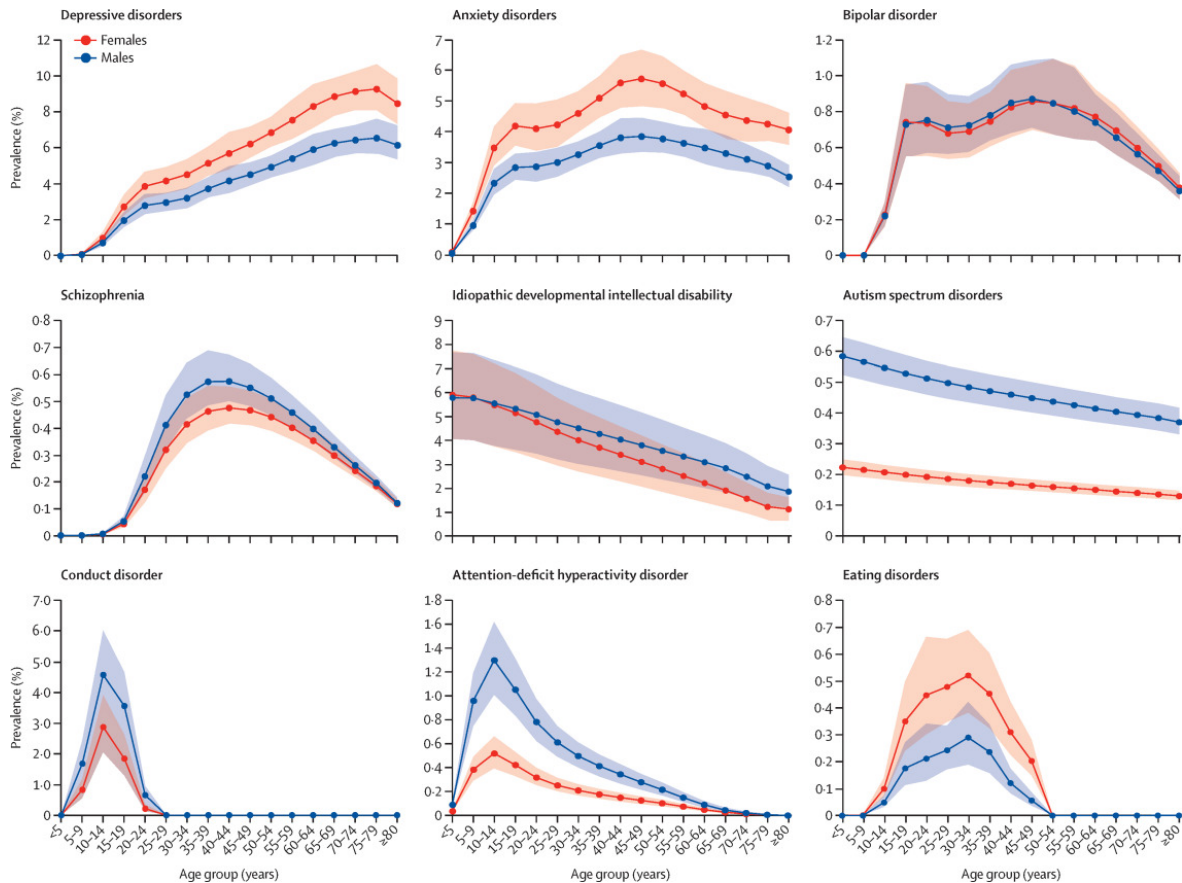


Idiopathic developmental intellectual disability



Conduct disorder





Brainstorming over the Indian scenario

- What is the interpretation on Depressive disorders/anxiety/Bipolar/Eating disorders?
- Which Indian states have the highest burden of mental health problems?
- Lack of awareness is a huge problem in India.
- Stigma associated with depression and mental health is a major barrier to improvement.
- Why India Is Facing A Mental Health Crisis

References

Global Burden of Disease (2018), 'Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990–2017: a systematic analysis for the global burden of disease study 2017', *The Lancet* .