

## Attitudes to Mental Illness among the multiethnic Singaporeans

Studies have suggested that attitudes to mental illness (AMI) is a broad concept which refers to individual beliefs about what people with mental illness are like and how they should be treated; and it includes both positive and negative aspects. However, the AMI among Singaporeans has not been widely researched.

In order to answer this issue, the Research Division of Institute of Mental Health conducted a survey among a nationally representative sample of the general population in Singapore. The study had 3,006 participants, and the Attitudes to Mental Illness questionnaire (originally developed by UK Department of Health) was used to explore AMI among the general population in Singapore.

The study found that AMI among Singapore's general population has four underlying components, namely social distancing, social restrictiveness, prejudice and misconception, and tolerance/support for community care. Interestingly, high prejudice and misconception towards mental illness could co-exist with positive attitudes towards individuals with mental illness. For example, Indians and Malays had higher prejudice

and misconception, but they also showed more positive attitudes (e.g. less social distancing and less social restrictiveness) towards people with mental illness than Chinese. The study also found that older age, male gender, lower education and socio-economic status were associated with more negative attitudes towards the mentally ill. Unlike the previous studies of AMI among UK general population, the current study suggested a different structure of AMI among the general population in Singapore. It also identified the risk factors for negative AMI among Singapore general population. The ethnic difference in AMI suggest that it is necessary to explore culture specific campaigns to promote AMI among individuals in Singapore.

More information about the study can be found at <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0167297>

Contributed by:  
**Dr Yuan Qi, Lead Author**



## Internalized stigma among psychiatric outpatients: Associations with quality of life, functioning, hope and self-esteem

Stigma is universal and has no boundaries, and is something that can affect anyone. Stigma towards those with a mental illness is no exception. Stigma comes in many forms, one of which is known as internalized or self-stigma. Internalized stigma refers to the process whereby the affected individual (i.e. those with mental illness) is aware of the stereotypes associated with mental illness, they believe these stereotypes are true and finally they apply them to themselves.

This stigma can result in people delaying help-seeking, poor adherence to treatment and has often been linked to poorer outcomes such as quality of life and self-esteem. To better understand how common internalized stigma is and some of the factors associated with it, a study was conducted among 280 outpatients at the Institute of Mental Health, who were seeking help for anxiety, depression, obsessive compulsive disorder or schizophrenia. Findings showed that internalized stigma was common amongst those with mental illness with 43.6% experiencing moderate to high internalized stigma. This internalized stigma was also found to be associated with poorer outcomes in people with mental illness. Lower scores on quality of life, self-esteem and general functioning were related to higher internalized stigma scores.

The results from this study are important as they highlight firstly that internalized stigma is common amongst people with mental illness. Secondly findings contribute to our understanding of the role internalized stigma plays in patients with mental illness, and the impact it can have on psychosocial aspects of their lives such as quality of life, self-esteem and functioning.

If you wish to know more about the study and its findings, the article can be found at: <http://www.sciencedirect.com/science/article/pii/S0165178116307818>

Contributed by:  
**Ms Louisa Monique Picco, Lead Author**



## Commentary on the Genetics of Cognition

The last half decade of genomics research has seen the proliferation of commercially available genotyping technology as more of the human genome is revealed with greater resolution. Human genetic databases, or genome-wide databases now stand in the millions of DNA markers. Examining the underpinning genetic architecture of a myriad of psychiatric, psychological and behavioral phenotypes has been the main stay of cognitive and psychiatric genetics research. Most complex traits are recognized to be polygenic, that is, thousands of genes are thought to be responsible for these traits.

Recently reported in *Molecular Psychiatry*, Researchers from the Cognitive Genomics Consortium (Primary Analysts: Joey Trampush & Max Lam) examined the neuropsychological performance and associated genetic architecture of 35, 298 individuals. Analyzing some 8 million DNA markers from each individual they discovered novel genes that were underlying neuropsychological performance. These genes are CENPO (2p23.3), RP4-665J23.1 (1p22.2), WNT3, PLEKHM1, ARHGAP27 (17q21.31), TP53, WRAP53 (17p13.1); ATXN7L2, CYB561D1 (1p13.3).

Further, it was also demonstrated in the same research work that the genetic architecture of cognition is congruent with the genetic underpinnings of Childhood IQ, Education, ADHD, Anxiety, Autism, Schizophrenia, Smoking, Birth length/weight and Personality. These evidence indicate that the biology of neuropsychological performance or more generally, cognition remains a pervasive area of our lives. A deeper understanding of the genetics of cognition would invariably lead us down the path of further elucidating biological mechanisms of cognition. These insights would be crucial catalysts for further research exploration of the etiopathogenesis of illness, and biological mechanisms responsible for the way we think, feel, make decisions and remember things. In the near future, researchers at the Institute of Mental Health, Singapore, along with international collaborators at New York, USA and the UK, would continue to draw biological insights from cognitive genomics databases standing close to 100, 000 individuals; a feat only made possible through intensive co-operation and sharing of research resources and data across borders.

More information about this commentary can be found at <http://www.nature.com/mp/journal/vaop/ncurrent/full/mp2016244a.html>

Contributed by:  
**Dr Max Lam, Lead author**

