

MINIDtalk

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OUR MISSION

- Understand factors contributing to youth mental problems through research
- Raise awareness of youth mental health
- Reach out to youth experiencing difficulties in coping with life stressors

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The Longitudinal Youth At-Risk Study (LYRIKS) – Why Should You Be Interested?

Singapore has, in the past few years, invested massively in biomedical research and, in particular, clinically important research that will benefit the local population. It is the government's strategy to focus resources on a few carefully selected disease areas e.g. cancer, diabetes, dengue fever and psychosis through the funding of special Research Flagship Programmes.

One such programme is the Singapore Translational & Clinical Research Flagship Programme in Psychosis which was awarded a S\$25 million dollar, 5-year grant to improve the early detection and treatment for schizophrenia and its related psychosis, considered to be among the most disabling disorders to afflict mankind and one of the world's greatest public health concerns. In Singapore, schizophrenia ranks 9th (together with breast cancer) among the various diseases in terms of burden of disease (the burden of disease employs a summary measure of population health that combines time and years of life lost) due to both premature mortality and disability arising from the disease.

There is currently no cure for schizophrenia and its cause is not fully understood. It is vitally important to identify and treat those with psychosis as early as possible. Research on the causes of and treatments for schizophrenia has recently forged ahead, in particular, the identification of young individuals who are at greatest risk for the disorder so that preventive measures can be instituted, and development of new treatments may reduce disability in those who already have the illness.

The Longitudinal Youth-At-Risk Study (LYRIKS) is the most important part of the Flagship Programme and is

an extensive study aimed at identifying social, biological, clinical and cognitive factors that are involved in the transition to psychosis in youth who are at risk of transition to psychosis.

The study involves recruiting and retaining a large cohort of participants between 14 and 29 years of age who would be followed up for a period of 2 years. Our community partners are those who work at the cutting edge of healthcare and these include the counsellors, social workers, psychologists from various family service centres, counselling services from schools and higher institutes of learning, clinicians from the Singapore Armed Forces and general practitioners.

Though a research project, we also see LYRIKS as a public health initiative and we are taking a community-engaged research approach as we strongly believe that partnering with the community is necessary to create change and improve health. By this we mean that we seek to work collaboratively with and through community partners with the aim of combining knowledge with action to improve health outcomes.

This is an entirely different approach from the traditional mode where researchers have turned to communities to recruit research "subjects" or to conduct a study on a community. Communities often felt that they seldom received benefits from this type of research after the researchers completed their research and left, without sharing their findings or creating a mechanism to continue successful programmes.

Our approach and philosophy for LYRIKS are that the communities are

our partners and collaborators while community members are viewed as research participants, not as research subjects. What is important to us is the sharing and dissemination of what we know from our management and research of those with psychosis and those at possible risk of psychosis. We want to help build the capacity of community partners to identify and manage those who are at risk of developing a serious mental illness like psychosis through various mechanisms, including training and consultation, and make our research in LYRIKS relevant to them.

We have initiated this process and have been building a collaborative network with common interests, shared commitment and ownership in this endeavour. We would like to extend further to reach out to more community health care providers to fulfill a collective vision that will benefit communities in Singapore.



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Schizophrenia: Facts & Figures

If you met Xiao Wei five years ago, you would have had no doubts about her ability to secure a great future for herself. She was an all-rounder who could balance school and extra-curricular commitments well. She worked hard as a student and had always excelled academically.

However, Xiao Wei's family members noticed that she did not seem quite herself when she was in her last academic semester in university. She was more irritable, preferred to spend time alone rather than with friends or family. She also often complained to her parents that her schoolmates were talking behind her back. Her parents attributed these changes to stress, and thought that she would be well after her exams.

Xiao Wei made it through her last academic semester with mediocre grades, but her mental health continued to deteriorate. She had difficulties sleeping at night, and her behaviour became increasingly bizarre. Her family members often noticed her talking to herself. She also became increasingly paranoid of people around her, including her own family members. On several occasions, she refused to eat the food that her mom cooked thinking it was poisoned. In the daytime, she draped the windows with pieces of clothing because she believed that her neighbors were peeping into her bedroom. She spent most of her time in her room flipping through the papers for jobs. Six months had passed since graduation, and she was still without a job.

Xiao Wei's parents eventually brought her to a spiritual healer thinking that she was possessed. Even after performing several sessions of healing, Xiao Wei's mental state remained the same. Her parents went on to seek help from a community counseling centre, and they were encouraged to bring her for medical treatment. She was consequently brought to the Institute of Mental Health (IMH) for a psychiatric assessment, and her parents were devastated to learn that their daughter had schizophrenia.

Schizophrenia

Schizophrenia is a severe and chronic mental disorder with a deteriorating course that will bring pervasive and permanent impairment to the affected individual.

It is a mental disorder characterized by a

constellation of symptoms including hallucinations, delusions, disorganized speech, grossly disorganized behavior, and negative symptoms (American Psychiatric Association, 2000). The disorder typically has its onset during the critical developmental period of



The term "schizophrenia" has often been used interchangeably with "split personality", though they are two distinct disorders. In fact, "schizophrenia" means "a mind torn asunder".

adolescence and young adulthood followed by significant deterioration in the affected individual's social and role functioning. As affected individuals live with the disorder for approximately 30 years, the deterioration continues and is compounded by each relapse the individual experiences, which is an inevitable corollary of schizophrenia (Tandon, Keshavan & Nasrallah, 2008). The deterioration is so pervasive that the disorder consistently ranks top 10 among the leading causes of years of life lived with disability across gender and all age categories (WHO, 2001).

The functional impairment that is associated with the disorder place affected individuals at greater risk of social problems e.g. homelessness and crime victimization. According to the National Resource and Training Center on Homelessness and Mental Illness (2003), individuals with severe mental illness account for approximately 20 – 25% of the single adult homeless population in the United States. Individuals with schizophrenia were also found to be at elevated risk of being victims of violent crimes, with an annual incidence rate of 168.2 per 1,000 individuals compared to the incidence rate of 39.9 per 1,000 individuals among the general population (Teplin, McClelland, Abram, & Weiner, 2005).

Given the functional impairments and social problems associated with the disorder, it is not surprising to find that individuals diagnosed with schizophrenia are twelve times more likely than the general population to commit suicide, with significant proportion of suicide concentrated early in the course of the illness (Palmer, Pankratz, and Bostwick, 2005). Individuals diagnosed with schizophrenia are not only at greater risk of suicide, they also have a threefold increased risk of death compared with the general population caused by a combination of lifestyle and treatment factors - such as increased cigarette smoking and substance abuse, and antipsychotic medication (Saha, Grant, & McGrath, 2007).

According to WHO, approximately 24 million people worldwide are diagnosed with schizophrenia. With a median annual incidence rate of 15.2 per 100,000 individuals, mental health professionals in Singapore should expect to treat approximately 600 - 700 new cases of schizophrenia per year (McGrath et al., 2004). This figure is very concerning because of the debilitating effects of the disorder on the affected individual and the sheer number of individuals who might be affected by the disorder. However, treatment has traditionally been focused on eliminating or ameliorating the symptoms associated with the disorder instead of preventing the onset of symptoms, as causes of the disorder are still unknown (NIMH, 2009). Considering the negative impact schizophrenia exerts across different system levels, it is imperative that the prevention of schizophrenia be a priority among mental health researchers and practitioners.

FAST FACT:
"Schizophrenia consistently ranks top 10 among the leading causes of years of life lived with disability across gender and all age categories."

- Source : World Health Organisation

Preventing Schizophrenia: summary of current efforts

Identifying Prodromal Signs & Symptoms

Schizophrenia is a progressive disorder with an insidious onset preceded by a prodromal phase before the emergence of a first psychotic episode (Figure 1). During the prodromal phase, an individual may first notice the following changes in self: reduced concentration and attention, reduced drive and motivation, depressed mood, sleep disturbances, anxiety, irritability, social withdrawal, and deterioration in school or occupational functioning. Family members may find the individual to be more moody, irritable, and withdrawn (Yung & McGorry, 1996). However, these prodromal symptoms are non-specific; clinicians and researchers alike have difficulties differentiating between the prodromal symptoms specific to schizophrenia and the prodromal symptoms of other psychiatric disorders (Yung et al., 2004). Therefore, the presence of these signs and symptoms does not imply that schizophrenia is inevitable since a person experiencing the aforementioned symptoms may or may not go on to develop the disorder.

Yung and McGorry (1996) conducted a comprehensive literature review on studies that had attempted to document the prodromal features of schizophrenia, and augmented the review with their own retrospective study of the prodromal phase in individuals diagnosed with first-episode psychosis. The presence of sub-threshold psychotic symptoms during the prodromal phase was consistently noted (Yung & McGorry, 1996). Findings from this study led to the identification of individuals at high risk of developing schizophrenia and other psychotic

disorder based on the presence of attenuated psychotic symptoms (McGorry et al., 2008). These sub-threshold symptoms differed from frank psychotic symptoms in their intensity, frequency, and duration. An example of a sub-threshold psychotic symptom is a fleeting persecutory idea that is held with less conviction than a delusion.

Research finds that over 40% of an initial study sample of 20 individuals who reported experiencing attenuated psychotic symptoms along with a significant deterioration in their functioning developed a psychotic disorder within six months of follow-up (Yung et al., 2003). A similar study conducted by the Prevention through Risk Identification, Management, and Education Clinic at Yale University reported that 54% of their sample of 13 high-risk individuals developed schizophrenia within 12 months (Miller et al., 2002). Another study by the Cognitive Assessment and Risk Evaluation Clinic in San Diego reported that 15% of their high-risk sample developed schizophrenia within one year (Haroun, Dunn, Haroun, & Cadenhead, 2006). These findings suggest that the presence of attenuated psychotic symptoms still does not imply that schizophrenia is inevitable although it heightened the risk for the disorder. For this reason, individuals experiencing attenuated psychotic symptoms are not conferred the diagnosis of schizophrenia but deemed to have an At-Risk Mental State (ARMS).

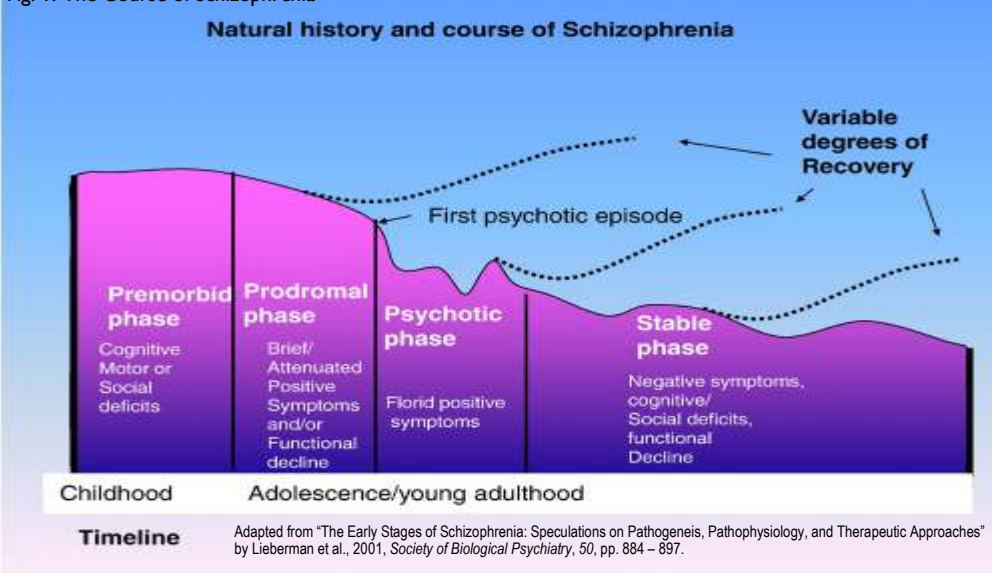
Limitations of Current Prevention Efforts

The wide variation in transition rates to psychosis across studies that based the identification of high-risk individuals on the presence

of attenuated psychotic symptoms (Olsen & Rosenbaum, 2006) raises the question of the predictive accuracy of the clinical criteria as a risk factor for schizophrenia. In addition to the heterogeneity in transition rates, studies find that adolescents and young adults in the general population commonly experience attenuated psychotic symptoms. This finding suggests that heavy reliance on the presence of clinical symptoms without considering the contribution of other biological and psychosocial risk factor of schizophrenia will inevitably lead to high false positive rates by using attenuated clinical symptoms as the sole predictor of schizophrenia. Therefore, a multivariate model combining biological and psychosocial risk factors in predicting the onset of the schizophrenia is needed to identify a large proportion of individuals who will develop the disorder while minimizing the number of individuals who will not develop the disorder.

References on request.

Fig. 1. The Course of Schizophrenia



FAST FACTS:

More than 50% of persons with schizophrenia are not receiving appropriate care.

90% of people with untreated schizophrenia are in developing countries.

- Source : World Health Organisation

Filling in the Gaps with LYRIKS

In response to this gap in knowledge, the Longitudinal Youth At-Risk Study (LYRIKS) aims to conduct comprehensive and prospective assessments of a large group of individuals with ARMS over a two-year follow-up period to determine the biological and psychosocial risk factors associated with the development of schizophrenia and other psychotic disorders. Findings from the study will allow mental health practitioners to be more accurate in the identification of high-risk individuals for preventive interventions.

Seeking mental health assessments institution bears the stigma of weakness that deters at risk individuals from seeking the appropriate treatment in a timely manner and volunteering to participate in the research. Locally, most individuals experiencing a first psychotic episode only sought psychiatric treatment after being ill for an extended period, and majority of these individuals consulted with other helping professionals before seeking consultation with a psychiatrist (Chong,



Subramaniam, Lum, & McGorry, 2005).

These findings highlight the need for more aggressive and creative outreach strategies to reduce the duration of untreated illness, and

the need for mental health professionals to collaborate with the community to identify high-risk individuals for early treatment and as potential research participants.

Some possible avenues of collaboration include but not limited to the following: (1) workshops to equip community counselors with skills in assessment and treatment of individuals with ARMS; (2) regular face-to-face consultation with senior consultant and consultant psychiatrists from IMH on the management and treatment of individuals with ARMS and psychotic disorders; and (3) direct referral to the research without going through any formal channels. LYRIKS is currently recruiting potential participants who meet the following criteria: English speaking, between the ages of 14 to 29 with at least a primary six education, and has been experiencing the signs and symptoms enumerated in Table 1.

TABLE 1. PRODROMAL PHASE – SIGNS & SYMPTOMS

Sleep disturbances	Increased anger & irritability
Depressed mood	Increased anxiety
Loss of motivation, interest & energy	Disturbances in concentration & attention
Increased interpersonal sensitivity	Suspicious of others & their intentions
Hearing vague noises or voices others don't	Deterioration in school or work functioning
Social withdrawal	Feelings of being followed
Odd behaviour by family or counsellor	Feelings of being laughed at or talked about

Potential participants are **not** required to experience all of the above signs and symptoms. To make a referral, please call 9234 1641 or 9298 0954 to speak to our Research Coordinator. Alternatively, drop us an email at tcrllyriks@gmail.com.



Tell us what you

MindTalk is just one of the many steps taken by LYRIKS in building a collaborative network with community partners like you. Your feedback is important to us. Tell us what you think of our current issue. Let us know what mental health topics interest you. Drop us a note if you any questions at tcrllyriks@gmail.com or alternatively, call us at ☎9234 1641. We'll be happy to talk to you about LYRIKS!

PARTICIPANTS NEEDED FOR A RESEARCH STUDY

ARE YOU THE **ONE** WE'RE LOOKING FOR?

The LYRIKS (Longitudinal Youth-At-Risk Study) will help us understand the factors related to the risk of developing mental problems in young people who are experiencing emotional or psychological difficulties.

If you have experienced some of the following situations in the past 1 year:

- Having difficulties concentrating in school or at work
- Deteriorating school or work performances
- Feel more socially isolated such that you have been more withdrawn from your friends and family members
- Always prefer to be alone and choose to engage in more solitary activities; feel uncomfortable out in public
- Developing poor eating habits, sleeping patterns, personal hygiene
- Feel more suspicious of people around you
- Feel someone is trying to harm you in some way
- Notice some interference or something unusual in your thoughts
- Hearing voices without knowing where they come from or that others do not hear

Take part in LYRIKS.

To be eligible, you should be:

- between 14-29 years old
- speak and write English
- have Primary 6 education and above
- don't have any neurological disorder/head injury

LYRIKS provides assessments and compensation to eligible individuals. To find out more and participate in this study, please call the Research Coordinator at 9234 1641 or 9298 0954 between 8.30 am-5.30 pm (Mon- Fri).

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For more information, visit our website at
www.neurosciecnctr.com.sg