# SCHIZOPHRENIA IN THE UNIVERSITY STUDENTS

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In a university setting mental ill health constitutes a major health hazard. Except mental defect and diseases of presenility and senility practically every psychiatric syndrome is likely to be encountered in university students. But, the conditions commonly found are psychoneuroses, personality disorders, psychosomatic illnesses and psychoses. Of these, the psychotic condition of schizophrenia, in terms of chronic social and academic disability, is the most crippling disease entity. It was therefore decided to make a study of the nature and degree of problem posed by schizophrenia in the University of Singapore.

It is proposed to analyse and discuss only those cases of students suffering from schizophrenia who were certified medically unfit to remain in the University while receiving treatment either at home or in a hospital. Cases of borderline schizophrenia which form a difficult diagnostic problem even for experienced psychiatrists have been excluded. The present study is based on data taken from the University Clinic's records of sixteen schizophrenic students, and also data obtained from the Woodbridge Hospital's case records and the Penang General Hospital's medical reports over a five year period from August 1958 to January 1963.

## INCIDENCE

According to Kallmann's statistics quoted by Noyes and Kolb (1958) average expectancy of schizophrenia in general population is 0.85 per cent. The condition is found almost universally and its incidence in any one country is considered to be not very far from this figure. In a survey of their English General Practice, Hewetson et al (1963) reported its incidence to be as high as 1.7 per cent. In the absence of any controlled survey of mental diseases in either Malaya or Singapore, the exact incidence of schizophrenia in this part of the world is not known; however, Wong's (1963) impression is that its estimated incidence in Singapore may be around 1.0 per cent.

Schizophrenia has been known to start in childhood and is found at any age onwards, but its maximum rate is noted in adolescence and early adulthood, the age group to which most University undergraduates belong. While the incidence of diagnosed schizophrenia at Cornell University for 1958-1959 was 0.25 per cent of the student population (Braaten, 1961), its rate of prevalence at the University of Leeds was reported by Still (1959) to be 0.32 per cent.

During the five year period under review 3,605 students were enrolled for full-time courses at the University of Singapore. Of this total student population, sixteen or in other words 0.44 per cent have so far developed overt schizophrenia. For reasons which follow the figure of 0.44 per cent of students at risk should be considered minimal. In the first place, not all students registered in the University, prior to 1960, were entitled to full benefits of Student Health Service; this was because those residing at home were excluded. Secondly, a certain proportion of students even though eligible for the service might have preferred to seek medical service and treatment from their own family doctors. And lastly, the majority of freshmen who gained entry in the 1960 and 1961 sessions are still in the University; and hence they have not been under surveillance for the entire span of their academic careers.

## DISTRIBUTION

The incidence of schizophrenia in our study was not uniform throughout the four racial groups composing the student population. Ethnic distribution of our cases was striking in that, although Malayan Tamils of Ceylonese origin formed only 4.58 per cent of the overall strength within past 5 years, out of sixteen cases of schizophrenia, six or 37.5 per cent were Ceylonese Tamils. The remaining ten cases occurred among Malayan Chinese who constituted 73.76 per cent of the student population. Overt schizophrenia was not known to have developed in any student belonging to the Malay, Malayan Indian or Eurasian communities. (Table 1). Among the women students who constituted quarter of the University population, there were five cases (31.25%); out of which two were Ceylonese Tamils and three Chinese.

Distribution of cases by courses encountered in this study was noteworthy, for although students registered for M.B.,B.S., course accounted for only 20.8 per cent of the University population they made up 43.75 per cent of cases of schizophrenia. Of the remaining nine students, five were registered for B.A., and four for B.Sc. (Table 2).

TABLE 1. ETHNIC DISTRIBUTION OF SCHIZOPHRENIA (1958 - 1963)

| Race | Chinese | Malay | Indian | Ceylonese | Eurasian | Others | Total |
|---|---|---|---|---|---|---|---|
| Student Population | 2,659 | 281 | 399 | 165 | 71 | 30 | 3,605 |
| Percentage of student population | 73.76 | 7.79 | 11.07 | 4.58 | 1.97 | 0.83 | 100% |
| Number of cases | 10 | Nil | Nil | 6 | Nil | Nil | 16 |
| Percentage of cases | 62.5 | Nil | Nil | 37.5 | Nil | Nil | 100% |

TABLE 2. DISTRIBUTION OF SCHIZOPHRENIA ACCORDING TO COURSE OF STUDY (1958 - 1963)

| Course | ARTS | LAW | SCIENCE | MEDICINE | PHARMACY | DENTISTRY | TOTAL |
|---|---|---|---|---|---|---|---|
| Number of undergraduates | 1,246 | 547 | 681 | 750 | 139 | 242 | 3,605 |
| Percentage of undergraduates | 34.6 | 15.2 | 18.9 | 20.8 | 3.8 | 6.7 | 100% |
| Number of cases | 5 | Nil | 4 | 7 | Nil | Nil | 16 |
| Percentage of cases | 31.25 | Nil | 25.00 | 43.75 | Nil | Nil | 100% |

Distribution of schizophrenic breakdowns by academic year or by length of stay in the university is also of some interest. Three students became overtly schizophrenic during the first year, two during the second year and the remaining eleven during the third or fourth years of their academic careers.

## PREVIOUS PERSONALITY

Fourteen students in this series happened to have had routine medical examination during their first year in the University, long before the actual psychopathology was disclosed. Since these routine checks involved, besides physical examination, some assessment of the individual's personality by means of inventories and interviews, their pre-schizophrenic personalities were largely known. Among the personality traits and characteristics common to most of them, were over-sensitiveness, over-conscientiousness, suspiciousness, reticence, shyness, tendency to day dreaming and preoccupation with bodily symptoms. Thus most of them could be considered to harbour schizoid traits.

It is noteworthy that none in this group had actively participated, during school days, in sports, athletics or social activities; nor did they show consistent interest in a hobby. In their pre-University days they concentrated on books and their studies.

## FAMILY AND SOCIAL HISTORY

The history of schizophrenia in close blood relations of three Malayan Tamils and two Chinese students was discovered after the onset of disease. It is significant that in these cases, the medical reports which they as freshmen were obliged to submit at the time of University entry, were devoid of family history of mental disorders, even though it was specifically asked for on prescribed forms. The ommissions could be ascribed either to lack of previous knowledge of mental illness in the family, or to fear on their part that their applications might be rejected. Since no detailed environmental histories from birth onwards were elicited, it is not possible to assess to what extent the interplay of constitutional and environmental factors subscribed to breakdowns in the patients who were already pre-disposed to disease. Notwithstanding, it is known that most of them hailed from rather authoritarian families and all except one were brought up in families with no obvious histories of unhappy home relationships; the exception being a boy who lost his father in childhood during the Japanese occupation, and whose mother remarried when he was eight years old.

Adverse economic circumstances were not likely to be the contributing factors, because all students were drawn from middle-to-upper income groups. Unhappy love relationships are at times considered to be precipitating factors especially in young boys and girls, but none of our cases admitted to history of this type of emotional stress.

## CLINICAL FEATURES

The clinical features of schizophrenic reaction are so numerous and varied that a descriptive study of the disease, in an article of this nature would be out of place. Nevertheless, it would not be inappropriate to recapitulate a few main features with some illustrative cases encountered in this study.

### *Bizarre Ideas and Actions*

Since to a lay person strange ideas and queer actions are the most striking features, the majority of our cases were referred by lecturers, fellows or other students for strange or inappropriate behaviours. One boy who harboured bizarre ideas that his blood was changing used to quarrel with room mates without rhyme or reasons. He used to carry a big knife wherever he went ostensibly to protect himself from other students whom he considered hostile to him. He was reported to be in the habit of riding a motor-cycle round the hostels aimlessly at odd hours. Another boy complained that there was something foul in his head. One female patient while waiting in the clinic for consultation, handed 10 cents to another student who was a stranger to her, in the presence of several others, and asked him to buy sweets for her. Her unreasonable emotional behaviour was also manifested in the form of asking absolutely irrelevant questions at public meetings. In another case, a woman lecturer noted something unusual in a boy's behaviour when during a tutorial he interrupted her with a request that she should ask the chairman of the Student's Union to see him.

### *Thought Disorder*

Thinking disturbance is an outstanding feature in schizophrenia. Normally, the associations of ideas follow one another with a definite logical connection, progressing to an ultimate completeness of thought. But, in this disorder they may be shortened, fragmented and otherwise so disturbed as to lack logical relationship.

All our patients showed varying degrees of thought disorder. An instance of thought disorder conveyed in a letter by a student to a

senior member of the staff is reproduced in part,

> "I am saying this because I know I am doing the right thing.
>
> Moreover these students are closely following everything, in fact every word, that is said during the lecture. This includes the use of various colours. Professor has also taken a liking for colours. Thus before going for last term's viva, I have told him not to put the loop around my neck concerning this student and speak up."

*Depression and Suicidal tendencies*

Schizophrenic patients are generally ridden by feelings of guilt and shame, and they tend to feel extremely depressed. They are also known to exhibit tendencies towards self-destruction. Schizophrenic depression, however, differs from true endogenous depression in that the former shows a split between ideas and feelings and is accompanied by strange behaviour, whereas the latter lacks these features. In contrast to reactive depression schizophrenic depression is insidious in onset and is more constant in symptomatology.

Our cases showed varying degrees of depressive feelings. One student was noticed by a lecturer to be sitting and crying at the back of a class during the lecture. Some others were reported to be tearful without cause after admission to the hospital. Half of our students showed suicidal tendencies, three of whom actually attempted suicide by swallowing barbiturates.

*Emotional Blunting and Incongruity*

In a normal individual there are links which maintain a satisfactory balance between thought, feeling and action. But, in schizophrenia all the links are either weakened or broken producing inappropriateness of thought, emotion and behaviour in relation to the external world.

Failure to express appropriate feelings is usually seen in forms of apathy and indifference. It is because of emotional blunting that a student ceases to take interest in academic work, and his mind starts wandering. All our student patients during the course of interviews conveyed the impression of varying degrees of emotional incongruity. For instance, one boy living in a Hall of Residence telephoned the author one night asking to see him urgently. On arrival, I found him sitting comfortably in chair and looking physically fit. His only complaint was fatigue during past few days. Though his emergency call was unnecessary he appeared very indifferent and failed to express any concern let aside an apology for calling the doctor.

*Paranoid Tendencies*

Among paranoid tendencies ideas of reference are probably the most common. They spring from the patient's sensitive and suspicious attitude. Consequently he misinterprets ordinary happenings as having some reference to himself.

Ideas of reference were predominant in all our cases and in some they took advanced forms of delusion. One student was suspicious of his father, thinking the latter was about to bring court action against him. And whenever his father approached near the telephone he would demand to know whether he was calling police to apprehend him. One girl felt that the whole University had been boycotting her. In another instance a boy felt that he was being watched by other students and that everything was arranged against him. Another boy sensed that some students with certain political trends were against him and were spying on him, although he did admit there was no positive evidence of this. These enemies of his would bang doors and play radios in order to prevent him from studying. One student harboured a delusion that the doctor gave him E.C.T. with a view to stabbing him.

*Social Withdrawal*

Inclination to keep aloof from associates followed by gradual withdrawal from all contacts with other students and staff, were the features commonly seen in our patients. Their general reaction to queries in regard to social connections was that they found it difficult to get along with others, because people always misunderstood them. These autistic attributes are considered to be a defence against being hurt by encounters with other individuals, and are thought to be compensated by flight into unreality and phantasy.

*Hallucinations*

Hallucinations are disorders of perception produced in the absence of external stimuli and can occur in any of the sensory fields. Only a few of our cases gave history of hallucinations in the form of ringing sounds or people talking to them. One student during the course of my hostel visit was found muttering and smiling to himself in response to auditory hallucinations.

## ACADEMIC DIFFICULTIES

Academic difficulties as a result of early schizophrenic reaction in our cases were presented as wandering of mind, narrowing of attention and lack of concentration. As the psychotic process progressed interest in work also declined; they became increasingly apathetic and withdrawn, and started dropping tutorials, lectures and practicals. This was followed by declining grades at terminal tests or failures in sessional examinations. That the gross academic deterioration in schizophrenia is largely the product of inner confusion, preoccupation with bizarre ideas (Braaten, 1961) and withdrawal from reality, rather than impairment of general intellectual faculties which takes place only in the final stages of the disease process, is illustrated by remarks contained in a report on a badly disturbed student by his professor. "This student's work during the earlier part of this term was satisfactory. His grades were not high but neither were they especially low. Some of his work showed shrewdness and imagination."

As the disease became overt in most cases, at the approach of examinations, it could be assumed that academic work load was the obvious major situational stress that precipitated the breakdowns. This view is further corroborated by the finding that a proportionately greater number of breakdowns occurred in students taking the M.B.,B.S., course, noted for its greater academic pressure and higher student competition.

In this series of sixteen cases, two withdrew from the University before the treatment was completed, and did not return. Of the remaining fourteen who obtained full benefits of modern psychiatric treatment including use of phenotropic drugs over long periods, nine either relapsed or did not make sufficient recovery to enable them to resume studies, and hence had to quit. Out of the five students who rejoined after first remission, two are still with us, two were awarded aegrotat degrees and only one succeeded in obtaining an Arts degree on satisfactory performance at the final examination. Thus of the sixteen schizophrenics who set out on University careers with definite goals in mind, only one so far, could be considered to have realised the ambition meritoriously.

## COMMENTS

Because of the relative smallness of student numbers—3,605 that have come under surveillance over past five years—it would be erroneous to draw definite conclusions in regard to the aetiology which contributed to marked differences in ethnic distribution of schizophrenia in the University. Nevertheless, our impression based on this study seems to be in agreement with a view that hereditary factors play an extremely important part in the aetiology of schizophrenia. Thus a proportionately higher prevalence of schizophrenia among Malayan Tamil students of Ceylonese origin could be explained on the basis of a high rate of consanguinity practised by their cultural group.

Prior to the advent of phenothiazine group of drugs, and its application in psychiatry, even if the patient recovered from schizophrenia he was prone to relapses. Moreover, he exhibited a certain degree of emotional and intellectual defect. As a consequence, his academic performance on resumption of studies was very seldom restored to what would have been expected normally from him. Although now, because of anti-psychotic drugs the outlook in this disease has improved, the prognosis in regard to suitability for University studies remains guarded. Hargreaves (1962) was of the opinion that when it comes to the selection of students for University education, previous schizophrenics should be rejected. If students develop the disease while in the University, Carstairs (1961) felt that with new methods of treatment and rehabilitation chances of their return to studies after treatment are brighter than they were in the pre-phenothiazine drug era. Our modest experience of the past five years leaves us with an impression that modern psychiatric treatment, even though it may assist in retrieving schizophrenics socially, has not fulfilled the dream of restoring their personalities completely nor in re-equipping their academic capabilities, to enable them to deal with the strenuous University life. This is because the heavy curricula and the qualities required for academic success, such as single mindedness and compulsive habits of learning intensify introverted or schizoid tendencies and are conducive to mental breakdowns.

## SUMMARY

1. Incidence of schizophrenic reaction in the University of Singapore students was found to be 0.44 per cent.

2. Although Malayan Tamils of Ceylonese extract constituted only 4.58 per cent of the student population, their share of total schizophrenic morbidity was 37.5 per cent.

3. No cases of schizophrenia were recorded in Malay, Indian and Eurasian students.

4. 43.75 per cent of schizophrenic reaction occurred in undergraduates studying medicine who formed 20.8 per cent of the overall student population.

5. Despite benefits of modern psychiatric treatment academic deterioration produced was so marked that a vast majority of them had to quit studies permanently.

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