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Psychiatric Morbidity amongst a Uganda Student Population

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Introduction

Makerere University College is the oldest institution of higher education in East Africa. Situated in Kampala, Uganda, it lies not far from the northern shore of Lake Victoria, and draws its student population from those countries around the lake shores—Kenya and Tanzania, as well as Uganda itself. Eighty-five per cent of the enrolled students are of African origin, the remainder being Asians.

The College is fully residential, and student numbers have increased apace during the past decade, from 450 undergraduates in 1954 (Allbrook, 1955) to 1,351 in 1966-67, the year during which the survey to be reported here was made. This rapid expansion in numbers has placed considerable strain on accommodation of all types, and has led to the frequent expression of fears that overcrowding, loss of privacy, large classes, and loss of personal contact with students will be reflected in excessive numbers of students with substandard mental health. Over and above these considerations (which are by no means unique to Makerere) this student population is of peculiar interest to psychiatrists, partly because it is predominantly African, but also because these African undergraduates occupy a central position in the whirl of social and cultural changes sweeping across East Africa. Bennett (1967) has drawn attention to the wide range of possibly unique stresses which have to be faced by the Makerere undergraduate: some of these stresses are a continuation of problems met with in secondary schools; others are unusual in pattern if not in quantity. The majority of students are the first generation of the educated. Great expectations rest upon their shoulders. For most, arrival at Makerere means a sudden change from a traditional, family centred way of life to the novel freedoms and restraints of a European patterned centre of learning set in the forefront of the intellectual, political and technological revolution of mid-20th century Africa.

Another reason for a psychiatric study of this population is that it is not always easy to find an accessible population of young Africans, products of their culture, but relatively free of the bewildering variety of organic and toxic conditions which so frequently obscure patterns of psychiatric morbidity in the African population at large. Many speculative assumptions are frequently made about the role of culture, cultural stresses, and the stresses of Western civilization in general in the aetiology of psychiatric disease. In view of the paucity of trans-cultural studies, and perhaps more particularly in view of our considerable ignorance of the aetiological mechanisms of almost all psychiatric disease, it would seem to be of paramount importance that the investigator should observe the greatest caution in attempting to assess the impact of culture on mental health, lest the overwhelming interest of unique cultural situations (unique to the European) should destroy scientific objectivity.

Apart from the dangers of impressionistic, anecdotal approaches to populations which are culturally unique, there are certain problems encountered by investigators who would seek not only to assess the prevalence of mental ill-health amongst students but also to provide data capable of comparison with figures from other universities. Kidd and Caldbeck-Meenan (1966) have drawn attention to these problems in a comparative study of psychiatric morbidity at two different British universities. The first fundamental problem is that by no means all students with psychiatric ill-health seek advice, or if they do seek advice they may go to practitioners outside the university health service. The second difficulty is the lack of uniform criteria for the recognition of psychiatric illness.

Kidd and Caldbeck-Meenan attempted to meet these problems by extending the scope of their study beyond university health services and including psychiatric morbidity figures obtained from general practitioners with whom students were registered. They also adopted a uniform case finding and classifying technique as devised by Kessel (1960).

This study reports an attempt to obtain accurate and comparable figures for psychiatric morbidity amongst the Makerere undergraduate student body during the academic year 1966-7. The problems raised by Kidd and Caldbeck-Meenan (1966) have been considered, and an attempt has been made to use case finding and classifying techniques similar to theirs.

Methods

Makerere undergraduates, an elite group of residential students, are in some ways remarkably insulated from the urban community around them. They do not consult medical practitioners external to the College to any great extent—partly because of the paucity of general practitioners—and if they do, they are likely to consult the College Medical Officer as well. Bennett (1967) estimated that in any one year, 90 per cent of the student body consult the College Medical Officer. During the year under review 83 per cent of all students consulted the same medical officer, and because of this student dependency on a centralized college health service it has not been considered necessary at this stage of this study to extend its scope to include general practitioners.

Estimated prevalence rates reported here have been calculated using the number of students who attended the College Health Service for any cause during the year as the denominator. To use the total number of students at risk as the denominator would be to assume that the students who did not attend the service were free of conspicuous psychiatric morbidity, and such an assumption would seem to be unwarranted.

During the year 1966–7, every student attending the College Health Service was seen, in the first instance, by the Medical Officer in charge of the service. In every case where psychiatric illness was thought to be the primary reason for the consultation, the case was either referred to, or discussed in detail with the consultant psychiatrist.

For the purpose of the study, a psychiatric illness was defined as any disturbance of a patient's health, deemed to be of a psychiatric nature, resulting in at least one consultation (Backett *et al.*, 1953). In identifying an illness as psychiatric, the modes of presenting psychiatric disability, as defined by Kessel (1960), were employed with certain modifications. As in the study by Kidd and Caldbeck-Meenan (1966), mental deficiency and senile dementia were excluded as not being relevant, and a diagnosis of formal psychiatric illness was made in every case, so that Kessel's category of 'conspicuous psychiatric morbidity' became absorbed into the categories of formal psychiatric illness. This was facilitated by the close contact between medical officer and psychiatrist, which enabled every case where the medical officer was in doubt about a diagnosis to be seen by the psychiatrist. Psychosomatic conditions were included only where there was evidence of psychiatric symptomatology in addition to somatic pathology, and in such cases a formal psychiatric diagnosis, based on the psychiatric symptomatology, was made. This avoids theoretical assumptions about the nature of a 'psychosomatic illness', such as peptic ulcer, particularly in cases where there is no evidence whatsoever of psychiatric symptomatology or of personality disorder.

Results

During the period of study, the population of students at risk numbered 1,351. Of these, 1,122 (83 per cent) attended the College Health Service for any cause during the year. An analysis of student characteristics showed that the non-attenders did not differ significantly from the attenders in respect of age, sex, or ethnic origin. Of the 1,122 attenders 121 (10·8 per cent) were found to be suffering from a psychiatric disorder, and out of 9,795 total attendances during the year 990 (10·1 per cent) were because of psychiatric disorder (Table I).

Table I

Percentage of psychiatric cases and psychiatric attendances

	Total	Psychiatric	% Psychiatric
No. of students attending ..	.. 1,122	121	10·8%
No. of attendances	.. 9,795	990	10·1%

Total student population at risk: 1,351

The age range of the psychiatric case material was from 18 to 31 years, with a peak incidence in the 21–25 age group (70·2 per cent). This

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shows no significant deviation from the age characteristics of the Makerere undergraduate student population as a whole, although the mean student age is probably higher than in British universities.

Table II shows the distribution of psychiatric cases by sex. Significantly fewer cases were noted amongst women than amongst men. This will be commented on later.

TABLE II
Comparison by sex

	No. attending	No. psychiatric	% psychiatric (Estimated prevalence rate)
Male ..	981	113	11·5%
Female ..	141	8	5·7%

Total male population at risk: 1,181
Total female population at risk: 170

As regards the distribution of psychiatric illness by race there was a significant difference between African and Asian students (11·5 per cent and 7·1 per cent respectively of the attending populations, shown in Table III). However, the sample of Asian students with psychiatric illnesses was too small (13 students) to permit of meaningful analysis in terms of diagnosis. Since this is also true of the small number of female students (8 students), the diagnostic breakdown that follows has not been analysed further in respect of race and sex.

TABLE III
Comparison by race

	No. attending	No. psychiatric	% psychiatric (Estimated prevalence rate)
African ..	940	108	11·5%
Asian ..	182	13	7·1%

Total African population at risk: 1,120
Total Asian population at risk: 231

The case material has been analysed according to diagnostic category as shown in Table IV.

The majority of cases fell into the psychoneurotic category, and in this category the most frequent diagnosis made was of some form of anxiety state. However, psychoneurotic illnesses are notoriously mixed as regards symptomatology, and the diagnostic criteria, especially for distinguishing between anxiety states and states of reactive depression, are diffuse. There is undoubtedly much overlap between these two categories, and too much should not be read into the reported figures. The diagnostic decisions in the cases of psychoneurotic illness seen have been based upon what appeared clinically to be the dominant psychopathological and symptomatological situations.

TABLE IV
Distribution of cases by diagnosis

	No. of cases	% of those attending	% of all psychiatric cases
Psychoses	8	0·7%	6·7%
Hypomania (2)			
Endogenous depression (2)			
Paranoid psychoses (3)			
Schizophrenia (1)			
Neuroses	104	9·3%	85·9%
Anxiety neurosis (75)			
Reactive depression (23)			
Hysteria (6)			
Personality disorders	9	0·8%	7·4%
Schizoid (7)			
Anxious (with alcoholism) (2)			

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An attempt has been made to further classify cases of anxiety neurosis in terms of the most frequently occurring apparent precipitating or exacerbating situation. The result of this analysis is shown in Table V. Not all cases of anxiety neurosis are included, since in some no single precipitant was obvious. The most frequently occurring stresses were related to examinations and study (40 per cent of cases) and to fears of having contracted venereal disease (33 per cent of cases). 'Genital anxiety' refers to doubts and fears about the size and potency of the genitalia: two cases of impotence fell into this category.

TABLE V

Anxiety states: common precipitants

Examinations, study	40·0 % of cases
Fear of venereal disease	33·0 % of cases
Fear of other disease	10·6 % of cases
Genital anxiety	4·0 % of cases
Social problems	4·0 % of cases
Financial	2·4 % of cases

Note: In the remaining 6 per cent of cases no single precipitant was obvious.

There were eight cases of psychotic illness, all falling into the functional psychosis category. There were no organic nor symptomatic psychoses, nor were there any successful suicides. One case of attempted suicide was dealt with—an African girl who had experienced a disappointment in love.

DISCUSSION

The most extensive previous study of psychiatric ill-health amongst Makerere students is that of Bennett (1967). His study covered the three years 1959–0, 1960–1 and 1961–2. Bennett, however, did not employ the same concepts of conspicuous psychiatric morbidity used in this study, and included psychosomatic cases such as peptic ulcer, asthma, skin diseases and hypertension, whether or not manifestations of psychiatric abnormality were present. Such cases would be excluded when using the three modes of presenting psychiatric disability defined by Kessel in 1960, even if exacerbations of physical symptoms *appeared* to be related to stress, as occurred with many of Bennett's cases. During the three years of his study, Bennett estimated prevalence rates of 17·5 per cent, 13·7 per cent and 13·2 per cent for psychiatric illness amongst male and female African students. But he has furnished sufficient data about many of his borderline cases to enable an attempt to be made to apply Kessel's criteria to his case material. When this is done approximate prevalence rates of 10·9 per cent, 9 per cent, and 9·2 per cent are obtained for the years in question. Although this correction may not be completely accurate, it would seem likely that there has been little change in the past seven years, for the corrected figures given above are very similar to the estimated prevalence rate of 10·8 per cent found in this study.

This suggests that despite rapidly changing social circumstances, and possible increases in student isolation, there has been no accompanying rise in the proportion of students afflicted with psychiatric difficulties in this particular College over a period of seven years, and may highlight the dangers of assuming that the amount of 'stress' in an environment is related in any simple way to changes in that environment or to the prevalence rate of psychiatric illness in that environment.

The great majority of Bennett's cases fell into the psychoneurotic category. Allbrook (1955), Arya and Bennett (1967) and Bennett (1967) have commented on the frequency of anxiety symptoms in the Makerere student population related to fears of venereal disease. This reflects the high incidence of gonorrhoea in this particular population and in the surrounding urban population, and is a good example of a local preoccupation colouring the symptomatology of a common psychiatric condition. Allbrook (1955) and Bennett (1967) also draw attention to the frequency of vague complaints of eyestrain, headache, and chest and abdominal sensations, complaints which were again most striking in this study. However, such complaints are familiar to all psychiatrists who have worked with student patients, and it is doubtful if any of them can be regarded as being peculiarly determined by East African cultural values. Allbrook (1955) states that his experience of psychiatric illness at Makerere does not appear

to differ widely from experience in British and American universities, and expresses some surprise that the background of Makerere undergraduates in the way of home and cultural tensions and stress is not reflected in a higher psychiatric morbidity rate.

Besides fear of venereal disease, the other common precipitating or exacerbating factor in psychoneurotic states found in this survey was worry related to study and examinations. This in itself is common enough in student populations, but there does appear to be greater strain experienced by East African students in this respect than by students elsewhere, which might be related to language difficulties and also to the enormous emphasis placed on academic success by families and society. In this connection it is of interest to refer to the 'brain-fag' syndrome described by Prince (1960, 1962) in West African students. Prince uses this term to describe sensations in the head and eyes, difficulties in concentration, excessive feelings of fatigue and sleepiness, and inability to learn, occurring in association with study. As used by Prince, the term 'brain-fag' syndrome could be applied to many cases observed in the course of this survey. These symptoms, in the context of study stress, appeared in anxiety states and depressive reactions, and coloured one case of endogenous depression. The 'brain-fag' syndrome does not appear to be a diagnostic entity in itself, but a situationally coloured constellation of symptoms, most often associated with depression (sometimes anxiety) and usually responsive to treatment with anti-depressant drugs.

It is worthwhile at this stage to draw attention to the studies of other workers in Britain. Britain is selected for comparison with this work because there is more likelihood of similar diagnostic criteria having been adopted in British studies than in studies at American universities where diagnostic habits differ. Dann (1964), in a survey of students at University College, Swansea, concluded that there was a marked preponderance of psychoneurotic disturbance in his case material, with a low prevalence of psychotic illness. He reported an overall annual prevalence rate of 8·2 per cent for psychiatric morbidity, and compared this with prevalence reports from other British colleges and universities (Table VI). The estimated annual prevalence rate for psychiatric illness of 10·8 per cent amongst Makerere students, as reported here, is not strikingly dissimilar to Dann's reported rate for Swansea.

TABLE VI

Estimated prevalence rate of psychiatric disorder in all students at various universities in 1960

Leeds	14·0%	(Aprox.)
Swansea	8·2%	
Sheffield..	7·5%	
Aberdeen	7·5%	
Edinburgh	4·0%	

After Dann, 1964.

Another study, that by Kidd and Caldbeck-Meenan (1966), already referred to, is a sophisticated comparison of annual prevalence rates for psychiatric morbidity at Edinburgh and Belfast Universities. Comparisons with their study are of great interest, since Kidd and Caldbeck-Meenan used the same case-finding and classifying technique as has been used in the present survey of Makerere students. To facilitate comparison, the Makerere, Edinburgh and Belfast figures are shown in Table VII. The Edinburgh and Belfast studies included a separate category of psychosomatic disorders. These, to-

TABLE VII

Comparison of estimated prevalence rates at Makerere, Edinburgh and Belfast. (Figures for male students in brackets)

	Overall prevalence	Psychoses (% of psychiatric cases)	Neuroses (% of psychiatric cases)	Personality disorder (% of psychiatric cases)
Makerere	10·8% (11·5%)	6·7%	85·9%	7·4%
Edinburgh	11·6% (9·0%)	4·6%	90·2%	5·2%
Belfast	10·2% (9·1%)	2·0%	91·0%	7·0%

gether with a variety of minor cases, have been included in the psychoneurotic category (as was done in the present study) for the purposes of Table VII.

It is apparent that, as regards the estimated prevalence of psychiatric morbidity and the basic patterns of psychiatric illness, there are striking similarities between Makerere undergraduates and those of some British universities. Kidd and Caldbeck-Meenan comment forcibly in their paper on the similarities, as regards psychiatric morbidity, between Edinburgh (a Scottish) and Belfast (an Irish) University, with marked differences in tradition and cultural background. Experience at Makerere emphasizes this point even more forcibly.

There are some differences however. The estimated prevalence of psychiatric disorder amongst female students at Makerere appears to be much lower (Makerere 5·7 per cent, Edinburgh 14·6 per cent, Belfast 13·5 per cent) than elsewhere. It is not easy to advance an explanation for this. The number of female students at Makerere is small (only 170 out of a total of 1,351), and this reduces the value of a prevalence study conducted over only one year. It seems likely that other factors operate as well. Female students at Makerere represent the final products of a long and arduous process of academic and other forms of selection which is much more taxing for women in East Africa than for men. In such a situation it is possible that girls with oddities of personality or episodes of emotional upset have been weeded out before reaching university. Amongst the remainder, basic motivations for the student role may be stronger. In addition, there is no doubt that the female students at Makerere, in spite of university freedoms, remain more shy and less articulate than their male colleagues, and it is probable that they are less likely to report emotional upsets to male doctors. The figures quoted here for female students may therefore not be very accurate, and too much reliance should not be put on them; however, this is an area that demands further research.

The cases of psychotic illness seen during the year (schizophrenia—1, hypomania—2, depression—2, and paranoid states—3) were strikingly similar to the classical Western descriptions of these illness, although the content, particularly of paranoid delusions, was dominated by local student preoccupations with politics, race, and education. The confusional admixture which is so often seen in psychotic states in the general African population was entirely absent, stressing the probable importance of either organic and toxic factors, or the effect of pre-literate cultural attitudes on the production of confusion. This is in keeping with Lambo's (1965) observation that literate schizophrenics in Western Nigeria manifest a clinical picture free of confusion and similar to clinical pictures seen in Western Europe.

The absence of a successful suicide amongst the case material of this survey is not particularly significant. Although overall suicide rates in university students are reported to be high, the annual rate at any one university with a student population of less than 2,000 might well be nil, as in this case. The two cases of depression included in the psychotic group both occurred in African men, with suicidal ideas, retardation, ideas of worthlessness, and other features of the so-called endogenous depression, including a positive family history in each case. It is of interest to note that both these depressed students subsequently expressed surprise at having been referred to a psychiatrist for an illness, which, because of the absence of excitement and grossly antisocial behaviour, did not fit in with their conception of 'madness'. This was a frequently expressed idea amongst most of the psychoneurotic group, but was never raised in respect of the patients with hypomania or the one with schizophrenia.

As regards diagnostic patterns in the group of psychoneurotic illness, pictures of anxiety and depression were very common and tended to merge into one another. In the six cases diagnosed as hysterical, conversion symptoms related to sensation, vision and voice production were the rule. There were no trance states or fugues, and no cases of hysterical memory disturbance. Also strikingly absent were any cases of obsessional-compulsive illness. This condition does appear to be extremely rare in East Africans of African origin. Nor were there any cases of anorexia nervosa. Homosexual problems were never seen as presenting prob-

lems, but three African males referred because of anxiety related to study stress, and with long standing anxious traits in their personalities, admitted, during the course of the psychiatric examination, to occasional homosexual behaviour; none appeared to be socially or psychologically disturbed by their bisexual orientation.

In conclusion, Makerere undergraduates, especially the men, appear to be not very different from students elsewhere as regards the prevalence of psychiatric illness amongst them. There is reason to suppose that local stresses differ in nature from those elsewhere, and this certainly adds a pathoplastic colouring to the symptoms of most mental and emotional illnesses at Makerere. A good example of this is the local preoccupation with venereal disease. Nevertheless, the estimated prevalence rate for psychiatric morbidity is in keeping with that reported from British universities where similar methods of case finding and classifying have been used, and the estimated prevalence rate at Makerere seems to have changed very little over the past seven years of growth and change. It would appear that the amount of strain experienced by the Makerere undergraduate in response to stress, is no greater than elsewhere, assuming that the distribution of personality patterns and resources is similar to that in other undergraduate populations.

Summary

This is a study of all students who attended Makerere University College Health Service during the academic year 1966–7. Out of a total population at risk of 1,351, approximately 1,122 students (83 per cent) attended the health service. Of those, 121 (10·8 per cent) were deemed to be suffering from a psychiatric illness. In the case of male students, the estimated prevalence rate for psychiatric morbidity was 11·5 per cent, a figure similar to figures from British universities.

Attention is drawn to the pathoplastic effects on symptomatology of local cultural preoccupations, but it is noted that the basic diagnostic patterns are similar to those reported from British universities.

There appears to have been no significant change in the estimated prevalence rate for psychiatric morbidity at Makerere University College over the past seven years.

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