

## The Relative Incidence of Psychiatric Disorder in Students of Psychology and of Other Subjects

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There is a general impression amongst doctors that students and ex-students of Psychology suffer more from psychiatric disorders than do the rest of the population. This impression has not, however, been backed by any figures so far as I can discover. Davidson *et al.* (1955), for example, in their study of the detection of psychological vulnerability in students, make no special mention of Psychology students. Nor is there any special mention of Psychology students in the Proceedings of the First International Conference on Student Mental Health, edited by Funkenstein (1959). This present paper is an attempt to remedy the deficiency in part, and to encourage others to collect and publish further data.

### METHODS

In order to determine whether more Psychology students suffer from psychiatric disorders than other students, a study was made at University College, Swansea. Here Psychology is studied as an option in the Philosophy course; there is no Psychology degree as such. The study was undertaken on all students entering the College in 1958, 1959 and 1960, these being the first years in which

adequate numbers of students read Psychology, and yet the latest years to enable the study to extend through the three years of a normal undergraduate course.

The distribution of students between those reading Psychology and those who did not (Non-Psychology) is shown in Table I, broken down by year of entry and by sex.

It will be seen that although the student numbers reading both Psychology and Non-Psychology increased annually, the proportion of students reading Psychology remained almost constant over the three years at about 1 in 20 of the student population. The sex ratios show that a higher proportion of men read Psychology compared to those who did not, the ratios of male to female in Psychology students being 1.6 : 1 and in Non-Psychology students 2.9 : 1. The difference between the proportions is statistically significant. This is established by applying the normal  $\chi^2$  test to the contingency table of sex versus subject. Doing this,  $\chi^2 = 3.92$  as compared with a tabulated value of 3.84 corresponding to the 5 per cent. significance level.

It was decided to record every student who consulted the College Medical Officer for a psychiatric disorder. The definition of psychi-

TABLE I  
*Distribution of Students Reading Psychology and Non-Psychology*

Year of Entry .. .. .	Psychology			Non-Psychology		
	1958	1959	1960	1958	1959	1960
Male .. .. .	10	11	18	202	348	348
Female .. .. .	5	8	11	92	106	117
Total .. .. .	15	19	29	294	545	465

atric disorder is to some extent subjective and therefore elastic, and here it has been stretched fairly widely. It covered all non-organic illness (see also the discussion at the end) together with all organic illness in which psychological factors might reasonably be deduced to have played a major part in the aetiology. These psychiatric disorders were classified into four groups: neurotic, psychosomatic, psychotic, and personality defect. This classification is again arbitrary, although useful in indicating the type of disorder suffered by the students. There was not sufficient material to justify analysing the disorders by specific types (e.g. schizophrenia), even if it were possible to label all these disorders so accurately, which of course it is not. When a psychosomatic disorder seemed to be evidence of neurosis, the disorder was classified under both headings; otherwise there was no overlap.

#### RESULTS

The distribution of psychiatric disorder between Psychology and Non-Psychology students is shown in Table II.

No attempt was made to analyse the number of visits of each student to the College Medical Officer for psychiatric disorders. Such an analysis would have involved determining how many separate episodes of psychiatric disorder each student had, and how often he came for treatment for each one. The difficulties in doing this are considerable, the chief being that it is very hard always to determine what constitutes a separate episode of psychiatric illness, and to determine the severity of a psychiatric illness from the number of visits to a doctor required to cope with it. In view of these difficulties, the analysis was not attempted.

However, the chief purpose of this paper is the comparison of the incidence of psychiatric disorder as a whole in Psychology and Non-Psychology students. This is shown in Table III.

The comparison when spread over the period of the survey as a whole shows that the proportion of students reading Psychology who had psychiatric disorder (1 in 3.4) was more than double that of Non-Psychology students (1 in 7.9). This difference is very highly significant statistically ( $\chi^2 = 14.34$ ) (and other-

wise), and confirms the belief of many doctors mentioned at the beginning of this paper.

If the comparison is made year by year instead of over the period of the survey as a whole, it will be seen that in 1959 the proportion of Psychology students who had psychiatric disorders (1 in 19) is lower than that of the Non-Psychology students (1 in 7.6). However, the difference between these proportions is not statistically significant, and therefore may be simply a chance occurrence.

The next comparison is of the incidence of psychiatric disorder in the two sexes. The sex ratio of psychiatrically disordered Psychology students was M:F=2.8:1, and in Non-Psychology students it was 2.6:1. The difference between these ratios is not statistically significant. Nor was there any significant difference between the proportions of male and female students who suffered from psychiatric disorder in the student population as a whole (male 1 in 7.5, female 1 in 7.1). However, for the male students the difference between the proportion of Psychologists and Non-Psychologists with psychiatric disorder is very highly significant, while for females the difference is not significant. Nevertheless, the difference between these differences is not significant. One concludes, therefore, that there is a greater incidence of psychiatric disorder among male students reading psychology than among those not reading psychology, but that there is insufficient evidence to establish such a relationship for the female students.

#### DISCUSSION

The discussion of this paper will be divided into two sections—Materials and Methods, and Results.

##### *Materials and Methods*

The numbers of students at Swansea, both overall and of those reading Psychology, are relatively small when compared with other universities. Therefore all the data in this paper have been subjected to a careful statistical analysis; the exact methods used are too complex for discussion here, but involved more than simple use of the  $\chi^2$  test quoted in the text.

TABLE II  
Distribution of Psychiatric Disorder Between Psychology and Non-Psychology Students

Year of Entry		Psychology		Non-Psychology	
		Male	Female	Male	Female
1958	Neurotic .. .. .	3	—	20	5
	Psychosomatic .. .. .	2	—	11	6
	Psychotic .. .. .	—	1	7	1
	Personality defect .. .. .	1	—	1	2
	Total .. .. .	6	1	39	14
1959	Neurotic .. .. .	1	—	28	6
	Psychosomatic .. .. .	—	—	18	7
	Psychotic .. .. .	—	—	1	2
	Personality defect .. .. .	—	—	2	1
	Total .. .. .	1	—	49	16
1960	Neurotic .. .. .	6	1	17	7
	Psychosomatic .. .. .	2	1	16	6
	Psychotic .. .. .	—	1	4	2
	Personality defect .. .. .	1	1	1	1
	Total .. .. .	9	4	38	16

TABLE III  
Incidence of Disorder

Year of Entry	Sex	Psychology Students			Non-Psychology Students		
		Disordered	Normal	Total	Disordered	Normal	Total
1958	M ..	6	4	10	32	170	202
	F ..	1	4	5	14	78	92
	Total ..	7	8	15	46	248	294
1959	M ..	1	10	11	44	304	348
	F ..	0	8	8	16	90	106
	Total ..	1	18	19	60	394	454
1960	M ..	7	11	18	34	314	348
	F ..	4	7	11	13	104	117
	Total ..	11	18	29	47	418	465
Total of All Years	M ..	14 (36%)	25 (64%)	39	110 (13%)	788 (87%)	898
	F ..	5 (21%)	19 (79%)	24	43 (14%)	272 (86%)	315
	Total ..	19 (30%)	44 (70%)	63	153 (13%)	1,060 (87%)	1,213

So far as the sex of the students is concerned, the policy at Swansea is to admit approximately one female for every three males. However there is no sex bias in the eligibility of students to read Psychology, and the relatively high proportion of males is of interest, and is statistically significant. Why more men than women want to read Psychology is discussed later.

Not all students consult the College Medical Officer when they are ill, and there is no knowing how many students, whatever subject they read, consult other doctors about psychiatric problems or anything else. Whatever bias is introduced at Swansea by students consulting doctors outside the University, it seems to be of the same order as that found at other British universities. This is shown by the incidence of psychiatric disorders at various universities (Table IV).

TABLE IV  
*Percentage Incidence of Psychiatric Disorders in all Students at Various Universities in 1960*

Leeds	..	..	..	14	(approx.)
Swansea	..	..	..	8.2	
Sheffield	..	..	..	7.5	
Aberdeen	..	..	..	7.5	
Edinburgh	..	..	..	4.0	

The proportion of psychiatrically as opposed to non-psychiatrically ill students going to the College Medical Officer may be higher (since it is one of his special functions to cope with such problems), but there is no reason why this should affect Psychology and Non-Psychology students differentially.

It is quite possible that the Psychology students are the more psychiatrically sophisticated and more ready to refer symptoms they suppose to be psychiatric in origin to the doctor. It would have been interesting, therefore, to have had both the Psychology and the Non-Psychology students tested for neuroticism and other psychiatric traits in order to confirm or refute this. However, this was not done for various reasons. Firstly, it is open to question whether there are any reliable tests of neuroticism (the largest group) in particular. Secondly, students are on the whole averse to filling in questionnaires. Thirdly, there is the

danger of deepening a neurotic trait by asking the student to partake in psychological tests. Although the question of the difference in psychiatric sophistication between Psychology and Non-Psychology students remains unresolved, therefore, it must be said that all freshmen are told that the College Health Service exists to cope with all personal problems, however non-medical they may seem, and in this way many psychiatric problems which are not recognized as such are in fact brought to the College Medical Officer. In this way any superior psychiatric sophistication which the Psychology students may have is probably rendered unimportant so far as this paper is concerned.

During the period of the survey there was a very high proportion of non-resident students at Swansea (87 per cent.) compared with other universities. Although this might have been expected to increase the rate of psychiatric disorder (Dale, 1954), Table IV shows that there is no reason to suppose that it did.

A big difficulty was to decide what constitutes psychiatric disorder; certainly not every personal problem brought to the College Medical Officer constitutes one. No rigid criteria were adopted in making this decision, but the general impression gained of the patient was used. There is, after all, no absolute distinction between normal and abnormal in the field of psychiatric disorder. Once more, the figures in Table IV support the conclusion that this was a valid method to adopt.

#### Results

Of the different types of psychiatric disorder found among all the students, there is a marked preponderance of neurosis and of psychosomatic disorder, as one would expect. The incidence of psychosis is small, and most of it was in fact due to schizophrenia. This statement accords in both its aspects with the figures of Coon (1961), based on the Harvard University Health Service. Personality defect is even rarer. It is interesting to note that although in female students of all subjects the incidence of neurosis and psychosomatic disorder is virtually the same, in males neurosis is the more prevalent.

In view of the small numbers involved, however, this can do nothing more than indicate a trend.

Another trend that can be seen is for the incidence of both neurosis and psychosomatic disease relative to the number of students to decrease as their numbers rise. This is surprising, since it might well be expected that these disorders would be minimized in a small community, but would increase as the community grew and its members became less well known to each other and consequently more isolated. The trend is not statistically significant, but is a feature worth investigating where more data are available. It would be interesting to know whether such a trend exists at other universities, and if so whether there is an optimum number of students after which the relative incidence of these disorders increases again.

The chief finding of this survey is the relatively high incidence of psychiatrically disturbed students of Psychology. The reasons for this can only be surmised, but it is a fair inference that those suffering from psychiatric disorders have a special interest in Psychology, probably consciously or unconsciously to help themselves. It may also be considered that those with a special interest in Psychology are the more likely to be interested and concerned with their own psyche, and therefore the more likely to find something wrong with it. After all, although the psychotic may often be referred to the doctor because the layman can recognize his bizarre behaviour, the neurotic usually refers himself, and is thus instrumental in the diagnosis. (It has already been shown in this survey that the neurotic disorders are predominant among Psychology students to an even greater degree than among the rest.)

The incidence of psychiatric disorder is higher among Psychology students than the rest to a significant extent in the males, but only to an insignificant extent in the females. This, together with the relatively high proportion of males choosing to read Psychology, suggests that males who are liable to psychiatric dis-

order tend to read Psychology, whereas this is not necessarily true of females. (It has already been shown that, taking the students as a whole, males are not significantly more liable to psychiatric disorder.)

#### SUMMARY AND CONCLUSIONS

A study was made of the number of students of Psychology and of other subjects at University College, Swansea, who came to the College Health Service with psychiatric disorders during their undergraduate years. The students entering in 1958, 1959 and 1960 were used. The psychiatric disorders were not analysed in detail concerning either the number of visits for treatment or the specific diagnosis, although a predominance of neurotic disorders was found, especially among the Psychology students. The main finding was that the proportion of students with psychiatric disorder amongst those reading Psychology was more than double that amongst the rest. It was also found that although this trend existed amongst the female students, it was only statistically significant amongst the males. The findings are discussed.

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#### REFERENCES

- COON, G. P. (1961). In Blaine, G. B., and McArthur, C. C., *Emotional Problems of the Student*. New York: Appleton-Century-Crofts, p. 116.
- DALE, R. R. (1954). *From School to University; A Study with Special Reference to University Entrance*. London: Routledge & Kegan Paul.
- DAVIDSON, M. A., et al. (1955). *J. Ment. Sci.*, 101, 810.
- FUNKENSTEIN, D. H. (Ed.) (1959). *The Student and Mental Health: an International View*. The Proceedings of the First International Conference on Student Mental Health, Princeton, N.J., 1956. Cambridge, Mass.: World Federation for Mental Health.
- GIFFORD, P. W. W. (1962). Personal communication.
- STILL, R. J. (1962). Personal communication.
- VERNEY, R. E. (1962). Personal communication.
- WORTH, H. (1962). Personal communication.

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