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'A STUDY OF 1,500 UNIVERSITY STUDENTS.'

This Study considers the Social Environment, the Physical and the Emotional Health of a sample of 1,500 First Year Full Time Students who reported for Medical Examination at the Student Health Service, The University of Adelaide during 1965 and 1966.

This Study is presented as a Thesis for the Doctorate of Medicine to the Faculty of Medicine, The University of Adelaide, by Robert Charles Heddle, M.B.,B.S. (Adelaide).

June 1968.

'Wherefore it appears to me necessary to every physician to be skilled in nature, and strive to know, if he would wish to perform his duties, what man is in relation to the articles of food and drink, and to his other occupations, and what are the effects of each of them to every one.'

Ancient Medicine - Hippocrates.

A STUDY OF 1,500 UNIVERSITY STUDENTS.

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PREFACE.

Sir D'Arcy Cowan, the Physician in Charge of the Chest Clinic of the Royal Adelaide Hospital, began a pilot study of the health of medical students at the University of Adelaide in 1944. In his endeavours to prevent pulmonary tuberculosis in medical students, Sir D'Arcy Cowan realised that such a survey would have wider application in the field of Preventive Medicine. He followed the philosophy of Hippocrates, when he saw the need for a Physician to 'strive to know, if he would wish to perform his duties, what man is in relation to the articles of food and drink, and to his other occupations, and what are the effects of each of them to every one'.

This original survey of medical students showed the value of establishing a Student Health Service. The Council of the University of Adelaide approved the formation of this Service in 1946. Until the present time, the facilities did not allow a comprehensive survey of the health of students.

The pattern of illness in any community varies with the passage of time. Until the immediate post-war years which coincided with the middle of this century, the major emphasis was given to physical and serious emotional ill-health of students. The minor emotional problems were usually overlooked. These minor emotional problems may

lead to serious emotional breakdown or to physical disability of a pyschosomatic type. There has been an appreciation of the fact that, as the demands of the widening fields of knowledge of man and his environment have progressed, the number of students with emotional ill-health have increased. The attitudes of students vary. One student is well adjusted to University life, and it can be anticipated that this student will have few difficulties with studies. Another student has obvious emotional difficulties of development and of adjustment to the environment found in the University. The possibility of this student proceeding without problems and emotional illness seems remote.

This Study presents a method of assessment of developmental and of environmental emotional states. With such methods, it is suggested that the student health medical officer can take steps to alert, to discuss and to advise the student about his particular difficulties. In this way, it may be possible to reduce the amount of minor emotional illness, and this will aid in the prevention of subsequent serious emotional breakdown in students.

It is difficult to alter the current social environment of students, but attitudes to social problems and University problems can be discussed with members of the Academic Staff, with the Student Counsellor, with the Clergy and with the

Student Health Medical Officer. By such discussions, the student will be helped to make decisions and to resolve problems.

Preventive Medicine can be practiced by the Student Health Officer in physical and emotional aspects of health and ill-health. If the medical officer feels unqualified to proceed with such advice he can call on the resources of outside medical personnel which may be the student's family physician, the consultant physician, surgeon or psychiatrist.

By attaining better adjustment to the environment, the student will be more likely to gain the benefit of an uninterrupted University education. This state of Health and 'Well-being' will be conveyed to the Community by the student after graduation. The student's specialised knowledge will place the graduate as a leader and as an example of good personal attitudes to 'living' with its many problems.

Investigation of the social environment, of the emotional and physical health has been carried out in this study which has been divided into three major sections -

1. Description of the Social environment of Students and their Families.
2. Description of the state of Physical Health of Students.

3. Presentation of a method of assessment of the Emotional Health of Students, and a description, using this method, of the Emotional Health of Students.

By the use of such methods of assessment of students, he findings in a consecutive series of 1500 students are resented as a contribution to knowledge.

SHORT SUMMARY OF THE CONTRIBUTION TO KNOWLEDGE.

This Study has considered the Social environment, the Physical and the Emotional Health of 1,500 First Year University Students who were examined consecutively at the Student Health Service, the University of Adelaide, by the Author.

From the beginning of the Student Health Service at this University, there has been an emphasis of prevention of illness. The pattern of illness has changed from the earlier years, when the prevention of physical illness such as pulmonary tuberculosis was paramount. The prominence of morbidity from minor emotional personal illness was a major reason for the author undertaking this Study. It was apparent that the methods hitherto used in the routine medical examination did not define this aspect. It was also apparent that there was a relationship between the poorly adjusted student and a subsequent request for help of a psychological type.

Some aspects of the Social environment of students have been investigated, the Physical state of Health of students has been determined, and a method of assessment of the Emotional state and attitudes of students has been presented. The assessment of Emotional state and attitudes has been carried out as the first step in the medical examination. Correlations have subsequently been made with

various aspects of the Social environment, the Physical Health, and the Academic performance of students.

In this sample of students, (75.2%) were males and (24.8%) were females. The average age was 18 years for students living permanently in Australia and 20 to 21 years for students from South East Asia. Female students were younger than males.

More students from Western Europe attended the University than would be expected from analysis of the pattern of the Total Population. A greater number of fathers of students come from the 'professional' and 'semi-professional' groups of occupations, when compared with the total population. Female students were more likely to have 'professional' fathers, and they were more likely to have a mother who had a tertiary education.

(41.8%) of students lived in homes in the Medium Rate Section of the Metropolitan Area.

(22.5%) of males and (12.1%) of females smoked, while (46.8%) males and (33.6%) females, respectively, drank alcohol.

As the University year progressed, the amount of exercise taken by students diminished.

The mean height of those students who have lived permanently in Australia was 69.7" in males and 64.9" in

females; the mean weights were 151.7 pounds and 126.6 pounds respectively.

One in five students had vision which was defective and required ophthalmological investigation. 58 students were found with some degree of deafness, and 50% of these students with defective hearing had no knowledge of this condition.

(5.2%) of students indicated a history of asthma.

The mean blood pressure of students living permanently in Australia was 127/68 in males and 116/65 in females.

The assessment of the Emotional state and attitudes has been made as follows:-

'Normal' - The well adjusted student.

'Developmental Conflicts' - conflict of dependence and independence.

- conflict of vocational identity.
- conflict of group participation.

'Life stress problems' e.g. domestic, economic, lodging, study or sexual problems.

Smoking had a greater incidence in male students with the conflict of 'vocational identity', while the conflict of 'group participation' was noted less in male students who drank alcohol. Male and female students who did not take exercise were less likely to be assessed as 'normal'.

Developmental conflicts have been found to be associated with elevation of both systolic and diastolic pressure in male and female students, while exogenous problems were associated with blood pressure elevation in male students. These findings are relevant to the possibility of hypertensive disease later in life.

Acne has been found to have an increased incidence in students with the conflict of dependence and independence, and with exogenous problems.

The highest failure rate occurred in students with conflicts of vocational identity and group participation, and with exogenous problems.

The development of a method of assessment of the Emotional state and attitudes of students makes possible measures of prevention of minor emotional illness:

1. As a result of this initial emotional assessment, the medical officer has in his possession a record which is of great help in assisting any student who may return at a later time with emotional difficulties.
2. When emotional 'conflicts' or 'problems' are discovered, the medical officer can discuss such areas with the student, thus giving him some insight. He can also make an appropriate

referral for more specialised help.

By using such a method, it is hoped that minor personal emotional illness will be reduced and Academic performance improved.

All of the medical examinations and interviews of students were made by the Author of this Study, and all the recording and considerations of these results have been carried out by the Author.

R.C. Heddle, M.B.,B.S.

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CHAPTER 1.

1.10. The History of Student Health.

1.11. Introduction.

1.12. History of the Health of Youth in Classical Times.

1.13. History of Student Health in Western Society.

1.14. History of Student Health in Australia, and the evolution of the Student Health Service at the University of Adelaide.

1.20. The Concept of Student Health.

1.21. Factors involved in the life of a University Student.

1.22. Basis on which the assessment of the emotional state of Students is presented.

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1.10. THE HISTORY OF STUDENT HEALTH.

1.11. Introduction.

The History of Student Health shows its development as an evolutionary process. It reflects the changing pattern of disease from a beginning, where the main emphasis was given to preventing gross organic illness, pandemics and epidemics, resulting from poor sanitation and poor environmental conditions.

The evolution has led to the stage where 'personal internal' factors, affecting the emotional health of students, have the attention of all Student Health Medical Officers.

1.12. History of the Health of Youth in Classical Times.

Ancient Greece exhibited concern about the health of its Youth for in 'Timaeus', Socrates states, when 'The evils of the body which cause disease' are considered, that 'no sort of instruction is given in youth to cure these evils, then all of us who are bad become bad from two causes which are entirely beyond our control'. 'In such cases the planters are to blame rather than the plants, the educators rather than the educated. But however that may be, we should endeavour as far as we can by education, and by studies and learning, to avoid vice and attain virtue'.

Further the relationship of Physical and Intellectual 'well-being' is expressed in the 'History of the Classical Public Games of Greece and Rome' by various authors including Daremberg and Saglio. These authors describe these games 'as athletic contests and spectacles of various kinds, and no instruction exercised a greater influence in moulding the national character and producing that unique type of Physical and Intellectual Beauty which is seen reflected in Greek Art and Literature'. The leaders in the Greek and Roman Societies were expected to have engaged in such games during their Youth.

These concepts of Health by 'education, and studies and learning' and physical activities at 'atheletic contests

1.12 (cont)

and spectacles of various kinds' set the pattern for 'Western Civilisation'. Such concepts embody 'Health Education' in the widest form.

1.13. History of Student Health in Western Society.

The United States of America can claim the first Student Health Service. Dr. Norman Moore (1) in the 'Practice of Student Health' tells of the first Service at Amherst College in 1856, when Public Health, Clinical Medicine, Physical Education and Mental Health were united in the Student Health Service. He relates the 'manner in which one and then another of these components received prominence in the following years, according to the need. At first typhoid fever required attention to food and water supplies by improved sanitation. Later in the 1920's and 1930's suicides and infections were the major causes of deaths. Sulphonamides required early diagnosis for the treatment of bacterial infections. Suicide pacts of the 1920's were followed by an epidemic of individual suicides of students in the 1930's. To reverse these trends in students, a combination of strong preventive and clinical measures became necessary'.

Some American Universities began Student Health Services in the early part of the 20th. Century, and Dr. Moore continues - 'If the mortality rate from mental and organic disease was to be reduced, a broader programme meeting the total needs of students was indicated, a programme which provided clinical care in addition to prevention and public health measures.'

1.13 (cont)

To carry out such a programme, the Student Health Services assisted in the close integration of Medical Faculties with other University Departments, and Services took responsibility of all illness, physical and emotional, acute and chronic. Those illnesses which could be treated locally were given early and adequate therapy: those illnesses beyond the scope of the Service were transferred promptly to a place where skills and equipment were adequate. Dr. Norman Moore continues - 'Some one must bear the "Total Care Responsibility", and this someone should be the officer in charge of the Health Service'.

Health Services in Canada followed the pattern of Student Health Services in the United States of America. In a 'Memorandum' (2), the Department of National Health and Welfare, Canada, University Health Services are described. The first Canadian Service is recorded at Acadia University in 1919, and, by 1948, these Services were well advanced. This 'Memorandum' continues - 'The Services vary, but in general terms, the following applied -

Medical examination at first registration, and in some cases this examination is repeated yearly.

Vaccination against small-pox is required.

A medical fee is charged on enrolment.

1.13 (cont)

Compulsory Physical Education for 1st. and 2nd. year students apply in two Universities'.

In North America, the concern of Student Health Services had changed from the original concept of 'prevention of mortality from organic and emotional illness' to 'prevention of morbidity and mortality from these illnesses'.

In the United Kingdom, interest in Student Health work was given impetus by a Report of a Subcommittee of the Royal College of Physicians London, in 1945 (3), and this was followed by a further Report in 1946 (4).

When addressing the 'British Student Health Association' at the Annual General Meeting in London, July 1961, the Vice Chancellor of the London University, Dr. C.F. Harris (5) recalled -

"For someyears, I watched with considerable misgivings the activities of a part time Service, run in his spare time by one who had been press-ganged into the job, and who, I think, regarded the outbreak of War as a happy release from an uncongenial chore. As Dean of my College soon after the War had ended, I had to plan a much more comprehensive Student Health Service, run by a full time Student Health Officer. Soon after its initiation, I got into grave trouble with a member of the Medical

1.13 (cont)

Subcommittee of the University Grants Commission who regarded the whole set-up, consulting room, Health Officer and all, as gross and unjustifiable extravagance. 'If the Northumberland miners can get on without a special doctor, why the ..... can't our students' was among the milder of his castigations. I still think that he was wrong."

These remarks show the apathy towards Student Health Services in certain quarters at that post-war time in the United Kingdom.

Professor Mair (6), the Professor of Social and Preventive Medicine, St. Andrew's University, states that 'a Service began in the University of Exeter in 1927, in the University of Edinburgh in 1930, and the University of Bristol in 1939, but the majority of Health Services in the United Kingdom started within 5 years of the conclusion of the 1939-45 War'. At the time of the survey by Professor Mair (1959-60), it was estimated that '25% of students did not have a Health Service'. He continued 'Health Services varied in the degree of care, and many worked closely with General Hospitals and Faculties of Medicine'.

A similar survey was made in 1957 by Dr. Norman Moore and Dr. John Summerskill (7) in the United States of

1.13 (cont)

America. Of the 1,157 Colleges and Universities interviewed (representing 61% of all Colleges and Universities), 200 had no Health Service. 859 of the remaining 957 Services required Physical examinations; 660 required Chest Xray, and approximately one half made vaccination against small-pox obligatory. 90% of the Colleges and Universities offered Physical Education programmes, and 75% offered medical care of athletes. Of the 957 Colleges and Universities, 80% reported a clinical programme for the care of accidents and illness among students. Of this 80%, only one half provided care for minor illness, but the remainder of the Services provide full care, or were able to refer to Hospitals for specialised skills. A full-time Physician was employed in 30% of the 957 Services.

In the period 1946 to 1950, several Student Health Services started in areas outside the North American and United Kingdom Areas. It is recorded that Student Health Services began in the University of Hong Kong, in the University of Otago and in the University of Adelaide during 1946. In 1948, the University of Ceylon started a Health Service in the Department of Physiology.

1.13 (cont)

Dr. D. Cowan (8), the Director of the Student Health Service, the University of Minnesota, (author's note - Dr. D. Cowan is unrelated to Sir D'Arcy Cowan of Adelaide) discussed Health Services in 1963, and he continued - 'Not only are the existing Health Services in the United States growing larger, but there is a growing awareness that every College should make provision for the Health Care of its students. In general, the larger Colleges and Universities in the United States have had good to excellent Services for many years. However many of the smaller Colleges have failed to assume responsibility for the health of students in any way... I believe that it is safe to say that currently there is more general acceptance of the idea that Colleges should take more responsibility for the Health needs of students'.

The literature on American Student Health Services tells of the scope of Services from large facilities including hospital and consultant services, to small part Services or to no Service at all.

Dr. D. Cowan continues by discussing the relationship between Private Medical Practitioners and Student Health Services, and 'there has been some friction between private Medical Practitioners and those in Student Health work,

1.13 (cont)

but the differences in attitudes has become less and less over the years. There is increasing acceptance of the principles of College Health Care. The American College Health Association is now an Association recognised by the American Medical Association'.

In 1965, Dr. Wilson Johnston, Director of the Student Health Service, Queen's University of Belfast, visited the University of Adelaide. Dr. Johnston stated that, as many University Students live in the traditional "Digs" in Belfast, there is a need for visiting and supervision of such students and lodgings. Further he stated that this was the pattern in many other Universities in the United Kingdom. As well, there is a need for British Student Health Services to provide small hospitals for the adequate treatment of the minor intercurrent illnesses of such students. It was common for Universities to employ 'lodging' and 'welfare' officers to supervise lodgings and 'digs'. Dr. Johnston detailed the 'Tea Party for Land-ladies' which his University arranges four times each year. By introducing the land-ladies to the University, he considers that 'they feel part of the University' with the resulting better cooperation with the Student Health Service, Lodging and Welfare Officers, and improved health of the University students who use such

1.13 (cont)

domicile facilities.

In 1965, Professor S. Greenhill, Assistant Director of the Student Health Service, the University of Alberta, Edmonton, Canada, reported to the Conference of the Australian and New Zealand Student Health Association (9). He stated that out-patient treatment is provided for students at the Health Service, and the Service has a 20 bed hospital for treatment of minor illness. The Service adjoins a General Teaching Hospital, where students with serious injury or illness are admitted. The staff of the Health Service includes Physiotherapists, Social Workers and Radiographers. The Health Service is closely associated with the Teaching Hospital, and the out-patient clinics in the Health Service are staffed by Registrars from the General Teaching Hospital. Internists are consulted, when needed.

Professor Greenhill indicated that 25% of the students at the University of Alberta are married. This situation requires the Service to employ an Obstetrician and Pediatrician. Ante-natal care is provided by the Health Service, but confinement takes place in the Maternity Section of the General Hospital.

Professor Greenhill, as Professor of Social and

1.13 (cont)

Preventive Medicine, uses the Student Health Service in training Medical Officers both at the under-graduate and graduate level. He indicated that other Canadian Universities have similar training programmes.

At the University of Otago, New Zealand, the Health Service began in the Department of Social and Preventive Medicine in 1946, but in 1957 the Service became a separate Department of the University with a committee of management consisting of the Dean of the Faculty of Medicine, the Professor of Medicine, the Professor of Social and Preventive Medicine, the Associate Professor of Physical Education and the Director of the Student Health Service. Many students at this University come from other parts of the country. Many live in either University Colleges or Halls of residence or in 'Digs'. These students have no local medical officer on which to call, and they use the Student Health Service, when ill.

The Universities of Canterbury, at Christchurch, and Auckland commenced [illegible] part-time Services in 1957. Both Services have expanded and have appointed Directors and other Medical staff. In 1964, a Student Health Service began at the Victoria University of Wellington. At this latter University, a Student Counselling Service

1.13 (cont)
had been in operation for some years beforehand.

Other Universities in New Zealand have no Student Health Service.

The Director of the Student Health Service at the University of Hong Kong, Dr. S. Bard, stated at the Student Health Conference in 1965, and later on a visit to this University, that his Service has full facilities for out-patient and in-patient care. Routine Medical Examination is made on all 'freshmen', and this examination includes a Chest Xray. Dr. Bard stated that the Chinese University of Hong Kong has a Student Health Service with a full time medical officer as the Director.

Dr. H.P.A. Wijetunge in 'Student Health in Asia' (10) delivered an introductory lecture to the World University Service Conference on Student Health in 1966 on the subject 'University Health Services'. In this address Dr. Wijetunge continued - 'I would like to trace the History and Development of Student Health in Ceylon'. He stated that the first University Health Service commenced working in 1948 at the University of Ceylon in the Department of Physiology. He continued in the lecture - 'Later the University Medical Officer came under the Direction of the Professor of Public Health, and to the duties of the Medical Officer were added medical

1.13 (cont)

examination of students prior to their admission, advice to students, medical certification in the event of illness, and the supervision of the sanitation of hostels and cafeterias'. In 1953, the University Medical Officer came directly under the Vice Chancellor, and the Medical Officer was responsible to the University Council through the Vice Chancellor.

Dr. Wijetunge stated that the Health Service has a twenty bed infirmary, ten beds for each sex, and three doctors and four nurses are employed on a full time basis. This infirmary has facilities for Xray and laboratory examinations. All facilities are provided free to students, and this includes specialised care, if required, at a General Hospital 5 miles away. Dr. Wijetunge continued - 'The growing recognition of emotional distress and psychosomatic symptoms in University Students has led to the organisation of mental health programmes. Counsellors, Guidance workers and Psychiatrists work together with University Medical Officers. The pre-entrance examination which is being abandoned in many Western Countries cannot be discarded in Countries which have not developed school health Services'.

When discussing Health Education, Dr. Wijetunge

1.13 (cont)

continued - 'In the University, many working hours are lost through laboratory and sporting accidents. A programme of environmental safety combined with environmental sanitation is called for. Adequate precautions should be taken in laboratories to safeguard students, technicians and research workers, using toxic substances and gases. Safety measures are necessary to minimize hazards due to exposure to radioactive materials. Precautions are required, when electricity is involved in experimental work. In the field of physical activity and education, the advice of the University Medical Officer is valuable in screening students participating in sport and in the prevention of athletic injuries as well as their care'.

Dr. Wijetunge concluded his lecture by stating the stages of evolution from 'the time when emphasis was placed on physical fitness' to the present day concept which 'covers physical, mental and social well-being of the student'. 'A good Health Service is a safeguard against student illness, and the competence and efficiency of a University Health Service will depend on the Physician and the Staff employed'.

This lecture shows that Student Medicine in Asia has leaders who will set an excellent pattern for less

1.13 (cont)

fortunate students and Universities, beset by enormous health problems. It is pleasing to know that the efforts of the International University Service are supporting measures which will prevent illness in students, and subsequently aid community health of the Developing Nations.

A similar pattern of the development of Student Health Services is recorded by Dr. Makota Murao, Director of the University Health Service, University of Tokyo, in 'Student Health in Asia' (11). Dr. Gutierrez, the Director of the Health Service at the Far Eastern University of Manila, Phillipines, visited the University of Adelaide in 1965, and during this visit he stated that his Service was endeavouring to apply methods of prevention of physical and emotional illness, but the work was hampered by a staff of 11 medical officers attempting to deal with the many problems of physical and emotional illhealth in a University of 50,000 students.

The University of Singapore and the University of Malaya established Student Health Services in 1957. Dr. S. Kadri, the Director of the Health Service at the University of Singapore, has given valuable assistance to Health Services in Australia by publishing an article 'Schizophrenia in Students at the University of Singapore' (12). Australian Universities have many Asian students,

1.13 (cont)

and this monograph gives some insight into the background of Asian University Students. Dr. Kadri reports that 'students who play no sport and who undertake no extracurricular activities are the group from which serious psychotic illness develops.'

Summary.

The History of Student Health Services of the North American Region and the United Kingdom have been traced from a beginning in 1856. The evolution has been shown to have had its origin in the United States of America, and later in Canada. From treatment of serious illness and epidemics, there has developed an appreciation that the emotional health of University students is an important aspect of Student Medicine, both for the serious and minor illness, and both from the aspects of clinical care to the application of prevention. Later the United Kingdom overcame some diffidence about the need for University Health Services, and, in the middle of the 20th. Century, most major Universities in the United Kingdom began such Services. At this time, there began Services in other Countries, especially in Asia. The work at the University of Ceylon has been described to show that in Asia there are leaders

1.13 (cont)

who will set a pattern of University Health Service work which will influence others in the area with an ultimate improvement in the health of students in Developing Asian Countries.

1.14. The History of Student Health Services in Australia, with reference to the evolution of the Student Health Service at the University of Adelaide.

It is recorded by Apps in 'Health Service for University Students' (13) (a document prepared for the First Seminar on Student Health, 1960) that Dr. Clements made voluntary medical examinations of students at the University of Sydney in 1936, and these were followed by a similar scheme in 1939.

At the University of Adelaide, the first suggestion of a student health service was made by Sir D'Arcy Cowan in 1938 in a letter to the Council of the University of Adelaide (14). Sir D'Arcy Cowan wrote this letter while visiting London. He described the formation of 'Health Centres in London' by Dr. Parnell in 1938, and he donated the sum of £50 to be used for the establishment of a 'Health Centre' at the University of Adelaide. Sir D'Arcy Cowan had previously investigated all senior medical students by Chest Xray and Mantoux testing as early as 1934.

When the medical course was shortened during the 1939-45 War, and with the increase of illness in Medical Students, the Dean of the Faculty of Medicine, Sir Trent

1.14 (cont)

de Crespigny, issued a letter (appendix 1) to all medical students advising measures to ensure good health.

Two approaches were made on the matter of Student Health in 1944. It is recorded in a Memorandum of the Vice Chancellors' Committee (15) of 1944 that 'a meeting of the Deans of Medical Schools in Australia had recommended that a regular Health Survey, including Chest Xray, be made on all medical students during their course'. At the same time Sir D'Arcy Cowan commenced a pilot survey of medical examination of medical students at the University of Adelaide. In November 1944, Sir D'Arcy Cowan wrote a Report (16) to the Vice Chancellor of the University of Adelaide concerning this survey. He stated -

'I have the honour to present an interim report on the examination of 100 medical students under this plan. The examinations were carried out on the lines suggested by the committee which is supervising this work. The examination form, approved for students in Physical Education (appendix 2), has been found to be satisfactory, and full records have been obtained. The general medical examinations were made by Dr. J.W. Rollison, special eye, ear, nose and throat examinations by Dr. H.M. Jay, and special

1.14 (cont)

examinations of the chest by myself. The work has taken longer than was anticipated owing to the fact that Dr. Rollison found it impossible to deal with more than four students at a session. The examinations started in April, and it is expected that they will be completed soon. On the whole, arrangements were satisfactory with little inconvenience to the examining medical officers or to the students examined. The attendance of students had been fairly satisfactory especially in the earlier years, but less satisfactory in senior years. I have tried to ascertain the reason for this. The main one seems to be that these senior students have already had routine examination, and they were satisfied with that. Also they had access to their own doctors and to Hospital Honoraries without payment of fees. Another reason which seems to be less significant is that students felt that they were being used as 'guinea pigs' for experimental purposes'.

Sir D'Arcy Cowan continued - 'It seems that, with the present medical staff and facilities, it will not be possible to extend the scope of the examinations to include all University students .....'.

1.14 (cont)

'As a result of this experiment, I am convinced that the examinations are of value, first as an educational measure, to impress on students the desirability of periodic routine examinations, and secondly from the practical aspect of drawing the student's attention to abnormalities found, and putting the student in the way of receiving suitable attention. I believe that the plan would be of even greater value for students of other Faculties, and I hope that the time will come when all students will be examined'.

Table 1. illustrates the results of this 'pilot study'.

	Total Number of Student in the Year		Examined	
	Male	Female	Male	Female
2nd. Year	37	6	36	5
4th. Year	43	5	39	5
5th. Year	35	5	21	-
6th. Year	44	1	23	-
	159	17	119	10

Table 1.

1.14 (cont)

In a further Report (17) to the University Council, Sir D'Arcy Cowan stated that 'the tuberculosis infection rate of 2nd. year students is about the same as that for other normal young adults. The increase in subsequent years is more than would be expected in young adults not especially exposed to infection'. The results obtained are shown in Table 2.

Year	Mantoux -ve.	Mantoux +ve.	% of reactors.
2	34	7	17%
4	32	13	29%
5	14	7	33%
6	5	18	78%

Table 2.

When discussing Table 2, Sir D'Arcy Cowan explained that 'medical students in the course of their clinical studies are especially exposed to infection of this type, and do in fact become infected for this reason.'

1.14 (cont)

Sir D'Arcy Cowan concluded this second Report by stating that 'as a result of my experience in this survey, I think it of value, and should be continued, and when circumstances permit, I think that it should be extended to include all University Students'.

In 1945, Dr. F.W. Mitchell, Head of the Department of Physical Education, the University of Adelaide, addressed the National Student Society of Australia on Student Health (18). He made the following points -

"Purpose - To examine those groups of students whose courses already require or demand students to be examined. (2nd. year Medical Students, Physical Education Students, and Physiotherapy students at the start of their course.)

- To provide an organisation which will make possible the examination of other University students.

1.14 (cont)

- To provide data of value in the field of Health and preventive medicine.

- To provide a basis for Health Education."

Dr. Mitchell concluded his address by stating that 'there is some justification for the view that a University is more than a place for professional training, and seeks to do more than develop knowledge alone. It can be a centre for the development of life, with a marked emphasis on the intellectual role of life, it is true, but nevertheless with some responsibility for the development of the 'whole man' '.

In April 1946, a committee of the Council of the University of Adelaide considered 'The Interim Report of the Royal College of Physicians London, on Student Health, 1946' (4). This committee which included Dr. F.S. Hone and Dr. Helen Mayo reported under six headings -

"i. The University should accept greater responsibility for the health of students.

This committee agrees that the time has come for the

1.14 (cont)

University to accept greater responsibility for the Health of Students. The Council has already provided a refectory, given help to develop sports grounds, and encouraged the pilot study conducted by Sir D'Arcy Cowan.

ii. Arrangements should be made for medical examination after entry, and periodic examination during the student's stay at the University, to detect physical and mental disabilities, and to indicate the available means for securing advice and treatment.

We do not think that it would be wise to institute compulsory medical examination before entry into the University, as in our opinion, there should be no bar to anyone entering as a student who has matriculated. Any possible danger from the spread of infection is met with by Chapter XXXII of the University Statutes.

The results obtained by voluntary system show the value of such examination after entry, and we recommend that they be maintained and extended, and that the thanks of the University be conveyed to Dr. Cowan for his voluntary assistance. The frequency of such examinations should vary with the different courses. Figures quoted show the necessity of two

1.14 (cont)

or three such examinations during the period as medical undergraduates, but we think that less numbers of examinations are needed in other Faculties.

We do not think that it is possible or even wise to make the examination compulsory forthwith, but with the institution of the compulsory fee, we think that every student should have the right to ask for and obtain such a medical examination at some time during his or her course.

iii. Arrangements should be made for medical and nursing care for students who are ill.

We do not think that these facilities should be extended to treatment and nursing, but that sickness found should be notified to the student with a recommendation to seek treatment from his private medical attendant.

iv. Inspection of lodgings.

This committee does not think that the provision of this recommendation can be carried out at this University.

v. Steps should be taken to improve the diet of students including the provision of canteens and other facilities.

Ample canteen facilities are provided in the Refectory.

1.14 (cont)

vi. University should consider the appointment of a medical officer for the general supervision of Student Health.

We consider that the medical officer in part-time sessions are sufficient. "

As a result of this Report (19), the University Council selected a 'Health Committee' under the Chairmanship of the Vice Chancellor. Rooms were made available in the adjacent Exhibition Building by the Department of The Army (20). Administration and financial responsibility were accepted by the University Union, and the Service was voluntary and available to all students.

Dr. Helen Mayo was appointed Chairman of the First Health Service Committee which met for the first time on 12 June, 1946. Dr. G.M. Hone and Dr. Ruth Heighway were appointed as the Medical Officers, and medical examinations began in October 1946. During that year, 31 men and 21 women sought a medical examination.

In 1947, the Health Service occupied rooms in the Union Building, and Miss G. Kelly was appointed Clerk of the Service. Early in 1953, temporary rooms were provided in the Medical School, while rooms were made suitable for the Service in the Prince of Wales Building. These latter

1.14 (cont)

rooms were occupied at the end of 1953.

Table 3. shows the early attendances at the Health Service.

1947	1948	1949	1950	1951	1952
119	326	315	356	435	457

Table 3.

In 1948, Dr. Ruth Heighway retired from the Service, and Dr. C.C. Jungfer was appointed medical officer. Mr. B.F.G. Apps, Head of the Department of Physical Education, was made Executive Officer, a post which he held until 1963.

The Council of the University made a Regulation in 1951 which required all full-time first year students to have a medical examination, chest Xray and Mantoux test. This examination could be conducted at the Health Service, or by the personal physician of the student on the Health Service Form (appendix 3).

Health Education was limited at first to the personal interview at the time of the medical examination, but a close liaison developed between the Department of Physical Education and the Student Health Service. In the Health Service Report to the Union Council, April 1951, (21), the

1.14 (cont)

Executive Officer, Mr. B.F.G. Apps discussed this association which 'is not merely an administration and staff one: it is obvious and natural that the two should go together. The Department of Physical Education was the first to include medical examinations for all of its students, and these were conducted at the beginning of each year. These examinations began with the course in 1940, and the forms used were later adopted by the Health Service (appendix 2).

It might be assumed that students electing to study Physical Education would be unlikely to be in need of treatment for unknown or unsuspected organic causes. There have been cases, however, revealed by the medical examinations which have justified them, and proved the value of their extension to all students'.

In this Report, Mr. Apps continues to discuss the reasons for the close association of the Department of Physical Education and the Health Service as 'The University has always regarded Health in a positive sense, and the medical examinations are regarded as the first stage only. A health Service must see that facilities are available for Physical Recreation and Health Education'.

This Health Service Report (21) refers to the Study Leave Report of Professor A.A. Abbie, at that time the Dean

1.14 (cont)

of the Faculty of Medicine. Professor Abbie discussed Student Health Services and 'every Medical School visited in the United States of America had a compulsory Student Health Examination'. Professor Abbie continued - 'Evidence of fitness on admission was required, and provisions were made against possible future ill-health. In particular attention was paid to correction of defects likely to interfere with efficient work during the University Course. The Service maintained a constant check on health through the course. In addition to its intrinsic value, the Service contributed to general education. As future members of the Community, all students become impressed by the value of preventive medicine and public health'.

In 1951, the subject of Student Health in Australian Universities was discussed in a Leading Article in the Medical Journal of Australia (22).

> "Considerable interest in the Health of University Students is a comparatively recent innovation. In places overseas it has been developing for years, in others it is neglected or just starting. In Australia, with the notable exception of Adelaide, almost nothing of a practical nature has been done

1.14 (cont)

officially. Nevertheless it is felt by many that the large body of young men and women congregated in a University, with their potential importance to the Community and their occupational hazards (for these must be recognised), offer a challenge that cannot be ignored by a community claiming to be Health Conscious'.

Even with the publication of this Editorial Article, a period of 6 years passed before a Student Health Service started at the University of Sydney. Within the next 4 years, Services began in the Universities of Queensland, New South Wales and Melbourne. In 1965, Monash University started a Student Health Service, followed closely by the Australian National University, and La Trobe University.

During the period 1953 to 1962, the Students Medically examined at the University of Adelaide showed a steady increase, which is illustrated in Table 4.

1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
617	726	802	1028	1062	1191	1109	1071	978	922

Table 4.

In 1958, the Health Service cooperated with the Poliomyelitis Services in an immunization campaign, using Salk vaccine.

1.14 (cont)

The Health Service Committee arranged the First Seminar in Australia on 'Student Health' during September 1960. The proceedings of this Seminar were recorded in a Report (23) which was edited by the Executive Officer, Mr. B.F.G. Apps. This Seminar has been followed by three Conferences - 1963 at the University of Sydney, 1965 at the University of Otago, Dunedin, New Zealand, and 1966 at the University of Queensland. At the Conference at the University of Otago, the 'Australian and New Zealand Student Health Association' was formed (appendix 4).

In 1961, the Student Health Service at the University of Adelaide was moved to a new site in the Benham Laboratories, the site where the Service is now situated. In 1963, the Council of the University accepted responsibility for the Student Health Service, and a Director was appointed.

At the First Seminar on 'Student Health ' (23), a Policy on Student Health Services was defined, and the procedures to be used were stated in the following manner -

1. Routine Medical Examinations of Students.
2. Prophylactic Measures. Chest Xray, Mantoux, and immunization procedures.
3. Casualty Services - i. Sport injuries.
   ii. Accidents.

1.14 (cont)

iii. Illness.

iv. Emotional illness, especially the types of this illness associated with the University life.

4. Health Education - at the individual level.
- at discussion groups.
- to large audiences.

5. Research.

Summary.

The evolution and history of Student Health Services in Australia have been traced. Attempts to start some type of Student Health Service during the 1930's initiated thought by Deans of the Faculty of Medicine of Australian Universities, and interest in the project was shown by Sir D'Arcy Cowan. Sir D'Arcy Cowan made a pilot study of the health of Medical Students, and these results demonstrated to the Council of the University of Adelaide the need to begin a Student Health Service.

From small beginnings at the University of Adelaide, Student Health Services have been accepted by the majority of Australian Universities.

1.14 (cont)

With the formation of Student Health Services, Conferences on Student Health have improved the knowledge of this work, and the 'Australian and New Zealand Health Association' has been formed.

1.20. THE CONCEPT OF STUDENT HEALTH.

The maintenance of the Health of University Students at an optimum level is a problem in the field of Preventive Medicine. The problem concerns the task of advising the student to adjust to the new environment.

Universities are accepting responsibility for ensuring that Student Health Services and Student Counselling Services are available to Students.

Whilst a uniform pattern of such Services is not desirable in Universities, each Student Health Service will adapt to its particular situation, and all will have the common objective of prevention of physical and emotional disability and the promotion of an optimum state of Health and 'well-being'.

The need for awareness of certain limitations was expressed by the Health Service Committee in a Report (24) in November 1960. This Report stated that traditional methods were important for the good adjustment of the student to the University environment. These traditional methods included the assistance given to students by mentors, tutors and members of the academic and administrative staff. The Report continued - 'This Committee believes that the traditional method is most desirable where there are sufficient members of staff available to give interviews with students. However, when specialists are appointed

1.20 (cont)

for the welfare of students, there may be an inevitable reaction that staff members would tend to leave it to the specialists. This is not only unfortunate for students: it is unfortunate for the staff. The danger of over-reliance on counselling should be recognised'.

In considering the concept of Student Health, consideration is made in two headings -

a. Factors involved in the life of a University student.

b. The basis on which the assessment of the emotional state is made in this Study.

1.21. Factors involved in the life of a University Student.

There are five aspects in the life of a University Student all of which may lead to problem states. They are -

i. Educational.

ii. Vocational.

iii. Environmental, and Social.

iv. Emotional.

v. Physical.

When specialist advice is required, Fig. 1 shows a suggested number of aspects which involve the Academic

1.21 (cont)

Staff, the Student Counsellor, and the Student Health Officer.

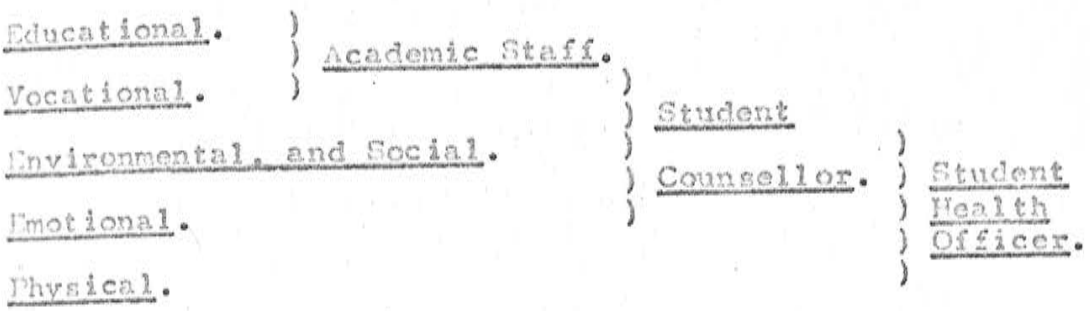


Fig. 1.

It is not inferred that these specialist areas exclude interest in other areas. The Academic Staff must be aware of environmental, emotional and physical states of students, and the Student Health Officer must have a knowledge of aspects of the educational and vocational problems of students.

Dr. A.H. Macklin (24A) in the Presidential Address to the British Student Health Association discussed the definition of 'Health'. Dr. Macklin introduces a definition by Crew who commented that 'Health' was 'that state of the individual in which harmony exists between the various component parts of himself and between the individual as a whole and the circumstances and conditions of his external world'. Dr. Macklin continued with some comments on this statement by Dr. Bomford of the London

1.21 (cont)

Hospital, and he stated that 'no man enjoys complete harmony either in relation to himself, or with his external world' and that 'health is not so much a state of harmony as the product of a process of continual adaption or adjustment, by which a reasonable degree of harmony is obtained'.

As the ability to adjust largely eliminates the element of worry, the deleterious effects of the state of poor adjustment can be reduced by the establishment of good communications between the three groups of specialist advisors to students, namely the Academic Staff, the Student Counsellor and the Student Health Officer. Where a problem has been found, the specialist in that field must investigate the problem in order that the 'good adjustment to the situation' can be restored to the student with such a problem.

The role of the Student Health Officer is stated in the 1966 Report of the subcommittee on student health of the Royal College of Physicians, London(25). This committee discusses the medical, psychological and social needs of students, and continues that 'these needs are in some respects distinct from those of the general population as they are often away from their homes, changing their hostel or lodging, sometimes every year, and often more

1.21 (cont)

frequently, so that they cannot usually get satisfactory continuity of medical care ...'. The subcommittee stated further that 'there has been an increasing recognition of the fact that the psychological aspects of a student's life have an immense importance for his health and for both the actiology and the management of any disease'. 'There has been a substantial increase in the general pastoral care that Universities now give their students, and it has been realised that the student health service must play a major part in this, particularly as far as psychological problems and personal counselling are concerned'. 'On the other hand, the fall in the incidence of tuberculosis, and the steadily improving physical health of school children has tended to reduce the relative value of the routine medical examination and annual chest Xray'.

The subcommittee discusses the development of student health services, and these developments 'have combined to move student health from one limited role of detecting and preventing incipient constitutional disease to a place where they have a much wider responsibility, not merely in providing clinical facilities, but contributing to the entire social process whereby students adjust themselves to the demands of the University, and the University adjusts itself to the needs of the students. For these

1.21 (cont)

reasons, ideal medical care requires a comprehensive clinical and prophylactic service, that is, an occupational medical service designed for the special needs of the Academic World.'

1.22. The Basis on which the assessment of the Emotional state and attitudes are made in this Study.

At interview, one student appears to be well adjusted, wheras another student shows evidence of poor orientation with noticeable difficulties of development and of patterns of behaviour to the stress which is experienced at the University.

A means of assessment of the emotional state and attitudes is found in a paper by Blaine (26) when the 'Problems of the Adolescent Student' are discussed. Blaine summarises the emotional problems of adolescent students in the following terms -

a. Conflict of Identity.
b. Conflict of sexual identity.
c. Conflict of dependence and independence.
d. Problems of Academic Performance.

This classification will be followed in this Study, and the results will be presented in Chapter 6.

Further theoretical considerations are discussed in this section which form the basis of this classification of the emotional state and attitudes of students. These considerations follow the theoretical formulations of Erikson.

1.22 (cont)

Erikson (27) considers the conflicts of development in more detail, namely -

"i. Trust and Mistrust.

The earliest criterion for judging a healthy infant personality is a 'sense of trust' in existence. The opposite and counterpart of this would be 'basic mistrust' in existence. The task of child training at the beginning of life is to offer a lasting solution for that conflict which accompanies a person through life.

Because of the way a baby is born, because of the way life is, he cannot help experiencing some form of 'mistrust' in existence, some sense of evil. The important thing is that his culture, through its method of child training, should give him a basic sense of trust in existence, and, later on 'through social institutions' such as religion, a restoration of that trust in so far as it has been damaged in earlier childhood.

This psychosocial stage occurs during the first year, and corresponds to the psychosexual stage of 'orality'.

ii. Autonomy v Shame and doubt.

To develop 'autonomy', a firmly developed and

1.22 (cont)

convincing stage of early trust is necessary. The infant must come to feel that basic faith in himself and in the world will not be jeopardised by this sudden violent wish to have a choice, to appropriate demandingly and to eliminate stubbornly. Firmness must protect him against the potential anarchy of his as yet untrained sense of discrimination, his ability to hold on and to let go with circumspection. Yet his environment must back him up in his wish to 'stand on his own feet' lest he be overcome by that sense of having exposed himself permanently and foolishly which we call shame.

From a sense of self control without loss of self-esteem comes a lasting sense of autonomy and pride; from a sense of muscular and anal impotence, of loss of self control, of parental overcontrol, comes a lasting sense of doubt and shame.

This second psychosexual stage occurs during the second and third year, and corresponds to the 'classical psychosexual stage of anality'.

iii. Initiative v Guilt.

The Child of 4 or 5 years is faced with the next stage, and with the next crisis. Being convinced

1.22 (cont)

that he is a person, the child must now find out 'what kind' of a person he is going to be. It is at this stage that most cultures teach the child what kind of 'initiative' is expected of him in his particular cultural and economic system.

The child can now 'envisage goals beyond his family'. It is at this stage that he is ready to divert from his mother certain expectations which he had cultivated in relation to her, such as being her husband later on. He diverts these towards the kinds of initiative which are offered to him in his culture; he diverts from his father tendencies of aggression and the wish to see him out of the way. He will gradually become related to his peers and to tasks of learning.

It is at this stage of initiative that the great governor of initiatives, namely conscience, becomes firmly established. The child now feels not only ashamed when found out, but also afraid of being found out. Guilt feelings arise in the tendencies of wanting to usurp the mother, of wanting to get rid of the father, the younger and older siblings. It is this sense of guilt and a developing sense

1.22 (cont)

of inferiority which has to be balanced at this stage by a sense of initiative.

This stage occurs about the 4th. and 5th. year, and corresponds to the 'classical' phalic stage of psychosexual development and to the oedipal stage.

iv. Industry v. Inferiority.

Before the child, psychologically already a rudimentary parent, can become a biological parent, he must begin to be a 'worker' and 'potential provider'. He now learns to win recognition by 'producing things'. He has experienced a sense of finality regarding the fact that there is no workable future within the womb of the family, and thus becomes ready to apply himself to given skills and tasks - he develops industry and he adjusts himself to the inorganic laws of the tool world.

To bring a productive situation to completion is an aim which gradually supersedes the whims and wishes of his autonomous organism. His ego boundaries include his tools and skills. The work principles teach him the pleasure of work completion by steady attention and persevering

1.22 (cont)

diligence. His danger, at this stage, lies in a sense of inadequacy and inferiority. If he despises his tools and skills or his status among his tool partners, his ego boundaries suffer and he abandons hope for the ability to identify early with others who apply themselves to the same general section of the tool world. To lose the hope of such industrial association leads back to the more isolated, less tool conscious 'anatomical' rivalry of the oedipal time.

Many a child's development is disrupted when family life may not have prepared him for school life, or when school life may fail to sustain the promise of an earlier stage.

This stage usually occurs from the 6th. year to the onset of adolescence, and is designated in clinical psychoanalysis as the psychosexual 'latency' period. With the establishment of good relationships to the world of skills and tools, with the advent of sexual maturity, childhood proper ends and adolescence begins.

v. Identity Crisis.

The identity crisis marks the conclusion of childhood. It is characterised by an enormous spurt of new

1.22 (cont)

needs, new energies, and new facilities, and therefore receives special treatment by societies and cultures; for before the young person enters adulthood, he must be sure to put his new needs, energies and faculties at the disposal of his society's values.

Among the special institutions designed for this stage, College (University in the Australian Culture) education is probably the greatest organised artificial postponement of adulthood, emotionally speaking, that could be imagined. There were always periods of apprenticeship, in any cultural system, which would lead to a reasonable date to the individual entering the life of his people as a worker, earner, and homemaker, and thus emancipating himself from his parent's home. College education is one among the many of these long apprenticeships of our time, which are getting longer and more specialised, and constitute a most radical postponement of some emotional satisfactions and a replacement of them by others. It fosters particular forms of extended childishness even as it cultivates certain forms of one sided precocity. This is so whether

1.22 (cont)

or not College education is more a means to an end, such as a trade or profession, or whether it is more an end in itself, as it becomes in some of our alumni who acquire a kind of College identity for life. In some cultures, the pursuit of knowledge is the only decent way of escape from one's childhood home, and yet to postpone establishing one's own. But since the period between childhood and maturity is what we call adolescence, "late adolescence" becomes an important term, not to be taken as a personal disability or fault, but a cultural institution.

In the sense in which going to College belongs to late adolescence, it also postpones the establishment of identity, even while it puts at the disposal of the young individual the knowledge and the techniques which help him to define his identity."

Erikson speaks "more specifically of ego identity which is meant to connect the theory of identity with the psychoanalytical theory of the ego. The ego may be defined as an inner agency which integrates the various crisis through which man passes.

How can we define ego-identity? Here we must learn to change from cause and effect thinking to thinking

1.22 (cont)

in terms of social relativity. Ego-identity can be said to be established when the individual comes to be and feels most himself, and this in pursuits and roles in which he also means most to others - that is, to those others who have come to mean most to him.

In a similar way, the individual chooses a future, even as he is determined by his past. In this sense, ego-identity also rests on the inner continuity between what one was as a child and what one is going to be as an adult. Rites, rituals and traditions seek to give the individual a sense that, on each stage of his long childhood and apprenticeship, everything occurred in preordained steps, so that he who looks into his future and tests his opportunities will perceive his past stages as adding up to something.

The sense of identity - Is it concious? Can it be observed? When the sense of identity develops, it is perceived by the individual and observed by others. This is often stated in the terms - "he knows where he is going." "

Erikson then discusses "the inner conditions which result from the circumstances in which a young person finds himself temporarily or lastingly unable to secure an identity development which takes into sufficient account

1.22 (cont)

the nature of his drives and needs, of interests and his capacities, of his ideals and opportunities. Such a person is then exposed to identity diffusion. We should be aware of the fact that even healthy and functioning young people function only through the (often costly) struggle with identity diffusion. While the cost of this struggle is not always mental disorder by any means, it can lead to a vastly limited use of the inner resources and outer opportunities.

The main symptoms of identity diffusion are -

- A disturbance of the sense of time. Everything is urgent - career, immortality and love, or that nothing matters enough to be in a hurry about it.
- There is an exacerbation of what we call 'self-consciousness'.
- The most apparent symptom is a paralysis of work-manship in the form of an inability to concentrate on required or suggested tasks, or a self destructive preoccupation with one sided activity - excessive reading, listening to music, exercising to exhaustion.
- Most important is the experimentation with 'negative identity'. This can be expressed in a scornful and snobbish hostility towards roles offered as proper and desirable in one's family or immediate community.

1.22 (cont)

vi. Intimacy v. Isolation.

This follows from the identity crisis.

The young people with whom we are concerned are trying to establish an intimate relationship with the other sex or the same sex, and this before their identity is well established. One cannot easily 'lose oneself' in an intimate or sexual relationship before one has 'found oneself' - or before one is ready to find oneself by losing oneself.

In this sense the great gap in some individuals and cultures between sexual potency (attested by Kinsley), psychosexual potency and psychological readiness for intimacy, becomes a major problem. A sound identity development supports a bearable abstinence as well as an enjoyable potency.

When young people have heterosexual relationships before the identity crisis is solved, either with simple social sanction or by early marriage as is now more usual, difficulties may arise, and divorces may ensue in considerable numbers."

For the purposes of the practical application of assessment of the emotional state and attitudes, and on the premises of Blaine and Erikson, definitions have been

1.22 (cont)

formulated in the following manner -

i. Conflict of Dependence and Independence.

"Extended childhood or one sided precocity".

ii. Conflict of Identity.

A. Conflict of vocational identity.

"The individual chooses a future".

B. Conflict of group participation.

"He means most to others - that is, to those who have come to mean most to him".

C. Conflict of 'Affective behaviour'.

"Scornful and snobbish hostility towards the roles offered as proper and desirable in one's family and immediate community".

iii. Conflict of Sexual Identity.

The crisis of 'intimacy v. isolation'.

iv. Problems affecting Academic Performance of an exogenous Type.

a. Domestic Problems.

Death of a parent, sickness or separation in the family. Divorce of parents.

b. Economic problems.

c. Lodging problems.

d. Study problems.

"I cannot understand my lecturer". "I find difficulty in preparing work for tutorials".

1.22 (cont)

e. The exogenous Sexual Problem.

"My boy friend has decided that we should not see each other " or "My girl friend may be pregnant".

Problems of 'affective behaviour' concern all students. It is considered that it is not the duty of a medical officer to assess the 'morals' of students or to discuss values. University Education must allow discussion and experimentation with such conflicts. If this were not so, all University Students would accept a stereotyped pattern of thought on such matters with a suppression of initiative and exploration.

Conflict of Sexual identity occurs continually in students of this age group, but in this culture the crisis point is not usually reached until the student is at second or later years of their University life. In order to establish attitudes of this conflict, it is suggested that the interview of each student would require a much longer period than is practicable in the context of a routine medical examination in a University Health Service.

Therefore, in view of these limitations, the assessment of the emotional state of students in this Study does not include the 'conflict of affective behaviour' or 'conflict of Sexual identity', but is confined to four

1.22 (cont)

major areas -

1. Conflict of dependence and independence.
2. Conflict of vocational identity.
3. Conflict of group participation.
4. Exogenous problems.

Summary. 1.20. The Concept of Student Health.

Health Services in Universities attempt to maintain an optimal level of health in the students at the University. They are concerned with the task of advising students in the setting of the University environment.

1.21. The factors involved in the life of a University student have been discussed. The Academic and Administrative Staff, the Student Counsellor and the Student Health Officer have a general interest in all the aspects, Educational, Vocational, Environmental, Emotional and Physical. The specialist areas of advice from these members of staff have been shown in Fig. 1.

1.22. The 'Problems of the Adolescent Student' have been considered with reference to the writings of Blaine and Erikson. In broad terms, these 'problems' might be defined as developmental difficulties arising from psychodynamic background 'conflicts' of childhood experiences, and 'exogenous problems' arising from a current stressful life situation. These conflicts and problems have been enumerated and certain of them specifically considered in order to make an assessment of the Emotional State and Attitudes of the 1,500 students in this sample.

CHAPTER 2.

2.10. Methods Used in the Study.

2.20. The Student Population.

2.21. Sex.

2.22. Number in Faculties.

2.23. Age of Students.

2.24. Area of Birth of Students.

2.10. METHODS USED IN THE STUDY.

The Physical, Emotional and Environmental states of 1,500 first year full-time students under consideration were obtained by interview and medical examination during the period May 1965 to September 1966.

These interviews and medical examinations were recorded by the author on the 'Student Health Service Form' (Appendix 5) and the 'Performance Sheet' (Appendix 6).

At the time of enrolment, the student completed a section of the 'enrolment form' which concerns the Student Health Service. At a later time, when the student reported for medical examination, this section of the enrolment enabled the Clerk of the Service to have the 'Student Health Service Form' prepared for that student. An appointment time was arranged for the medical examination of the student, and care was taken so that neither lecture, tutorials nor practical classes were missed or interrupted.

When the student reported for the medical examination, he or she completed pages 1 and 2 of the 'Student Health Service Form', i.e. the section of the form dealing with age, marital state, Faculty, Family and Personal History of the student.

Measurement of height and weight was made, the urine tested, and visual acuity ascertained by the use of Snellin's type. Colour vision was tested by the use of the

2.10 (cont)

Ischihara Test.

The student entered the consulting room, and 10 to 15 minutes were taken to discuss the History given by the student. Student attitudes were observed, and assessment was made of any environmental or emotional problems.

To define the emotional state of students, the following procedure was made as a routine measure. The student was asked the following questions -

2.11. "How does Dad treat you?" "Will your parents talk things over with you and respect your views and opinions?"
"Does the family trust you with the car?"
"How do you get along with your brothers and sisters?"
Discussion on these questions led to an assessment of adjustment to the Conflict of Dependence and Independence.
Some students were overprotected, while others had been rejected by parents. Both of these groups of students were assessed with a Conflict of Dependence and Independence.

2.12. a. "Why did you decide to come to the University?"
"What do you wish to do when you have gained your degree?"

2.10 (cont)

"Is the course the one which you would have chosen had you the opportunity to start again?"

The replies to such questions indicated whether the student had adjusted to the Conflict of Vocational Identity.

2.13. "Do you enjoy University Life?"

"Have you many friends, and do you belong to any University Clubs?"

The replies and demeanour of the student gave the basis of an assessment of 'Conflict relating to group participation'.

2.14. The Health of the mother and father were noted on the History sheet. "Is your home life happy?" introduced a discussion on the health or ill-health of the family, and there followed a general discussion about the 'stressful situations of life' or the exogenous problems.

The assessment of the emotional state was recorded in the following manner:

'Conflict of dependence and independence' - 'M' Section on the performance sheet.

'Conflict of vocational Identity' - 'I' Section B.b.

2.10 (cont)

'Conflict relatingto group participation' - 'R'
Section B.a.

'Problems of an exogenous type' - Domestic - 'D'
Section B.b.
- Economic - 'E'
Section B.b.
- Lodging - 'L'
Section B.b.
- Study - 'A' Section B.b.
- Sexual - 'S' Section B.b.

'History of previous psychotic illness' - 'P'.

A student might be assessed with a single or multiple numbers of these 'conflicts' and 'problems'.

These assessments were recorded on the 'Performance Sheet' before the physical examination was undertaken.

Following the medical examination, any physical abnormality found was discussed with the student, and, when possible, methods of correction were suggested. Similarly a further discussion was initiated concerning developmental or life-stress situations. The extent of these discussions depended on the rapport established between the student and

2.10 (cont)

the examining medical officer.

Study habits, exercise and relaxation were considered, and, where it applied, advice was given on the need for a balanced programme of study, exercise, relaxation and sleep.

This final part of the interview allowed a discussion on Health Education at the personal level.

All records which had been obtained were transferred to 'punch' cards for use in the Computing Centre.

Statistical analysis has been made on the findings by comparison of students involved in special aspects of the Study with the students in the total study, and, when raw figures were available, by comparison with the findings of other authors. The analysis has been made by the use of X^2 statistical comparison.

2.20. THE STUDENT POPULATION.

Introduction.

Students who were full-time were required to have a medical examination, either at the student health service or by their family physician on the Student Health Service Form of Medical Examination. The students in this sample elected to have the medical examination at the Student Health Service, and they reported in the normal way for a suitable time for the medical examination. No student was especially selected for this Study, either by the author, by the Clerk of the Service or by the students.

Procedure.

The student population of this group of 1,500 students is considered in the following sections -

2.21. Sex.

2.22. Number of Faculties.

2.23. Age of Students.

2.24. Area of birth of Students.

2.21. Sex of Students.

Results.

Students in Year and Sex

Year	Male	%	Female	%	Total
1965	484	74.9%	162	25.1%	646
1966	644	75.4%	210	24.6%	854
Study	1128	(75.2%)	372	(24.8%)	1500

Table 5.

Discussion.

Statistical analysis indicates that the male/female ratio is constant for the two years 1965 and 1966.

This sample has 75.2% males and 24.8% females.

2.22. Number in Faculties.

Results.

Table 6 shows the number and sex of students in Faculties, and the percentage of males and females of first year students of the Study in each Faculty.

Faculty	Males	% males in Faculty	Females	% females in Faculty	Total	% Total of study
Agricultural Science	43	93.4%	3	6.6%	46	3.1%
Architecture	21	72.4%	8	27.6%	29	1.9%
Arts	59	32.1%	125	67.9%	184	12.3%
Dentistry	67	83.8%	13	16.2%	80	5.3%
Economics	67	91.8%	6	8.2%	73	4.9%
Engineering	197	100.0%	-	-	197	13.1%
Law	92	81.4%	21	18.6%	113	7.5%
Medicine	124	87.3%	18	12.7%	142	9.5%
Music	-	-	8	100.0%	8	0.5%
Pharmacy	52	77.6%	15	22.4%	67	4.5%
Physiotherapy	7	19.5%	29	80.5%	36	2.4%
Physical Education	8	60.5%	5	39.5%	13	0,9%
Science	282	76.6%	86	23.4%	368	24.5%
Social Studies	2	6.4%	29	93.6%	31	2.1%
Technology and Applied Science	107	94.7%	6	5.3%	113	7.5%
	1,128		372		1,500	

Table 6.

2.22 (cont)

Discussion

2.22.1. Number in Faculties.

Table 6 indicates that the largest numbers of students are reading Science, Engineering and Arts, respectively. The reduction in the number of students reading Arts may be explained by the fact that many students in the Faculty of Arts are studying at the Adelaide Teachers College. Such students are required to submit to medical examination by the School Medical Services, of the State Health Department, and these examinations are conducted for the purpose of superannuation. The practice of examining these students at the Student Health Service was discontinued in 1953.

2.22.2. Number of males and females in Faculties.

In the Study, 75.2% of students are males, and on this basis Faculties with a male predominance are -

Engineering	100%
Technology and applied Science	94.7%
Agricultural Science	93.4%
Economics	91.8%
Medicine	87.3%
Dentistry	83.3%

2.22 (cont)

Law	81.4%
Pharmacy	77.6%
Science	76.6%

Similarly 24.8% of female students are found in the total Study.

Faculties with a female predominance are -

Music	100%
Social Studies	93.6%
Physiotherapy	80.5%
Arts	67.9%
Physical Education	39.5%

Summary.

The number of students in Faculties have been shown.

The male and female percentage of students in Faculties have been indicated, and it appears that, in general terms, courses with a professional basis are preferred by males, while courses with a humanities basis are preferred by females.

2.23. Age of Students.

Results.

Table 7 and Fig. 2 demonstrate the distribution curves of the ages of males and females in the Study.

Age of Students

Age	Males	% of males	Females	% of females
16	4	0.4%	5	1.3%
17	273	24.2%	134	36.0%
18	534	47.3%	190	51.1%
19	200	17.7%	28	7.5%
20	58	5.1%	8	2.1%
21	31	2.7%	3	0.8%
22	9	0.8%	2	0.5%
23	9	0.8%	2	0.5%
24 and over	10	0.9%	-	-

Table 7.

Discussion.

If comparison of the age of male and female students of this Study is made, it appears that more female students are aged 17 years than male students. ($P < 0.001$)

The incidence of first year male and female students of the age of 18 years is the same ($0.70 > P > 0.50$), whereas there are more male students of the age of 19 years ($P < 0.001$).

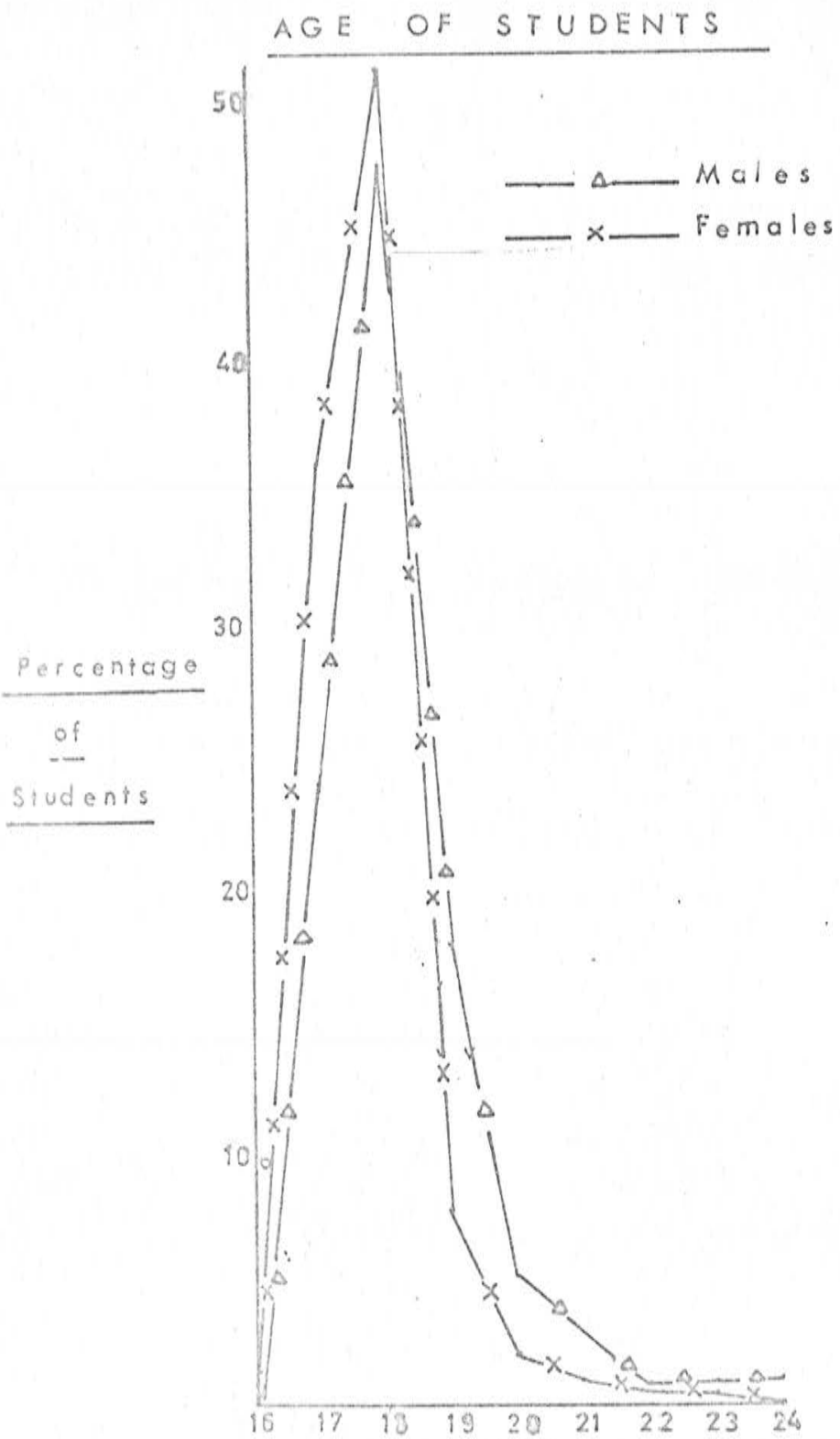

AGE OF STUDENTS
Males
Females
Percentage of Students
50
40
30
20
10
16
17
18
19
20
21
22
23
24
AGE

FIG 2

2.23 (cont)

Table 7 and Fig. 2 show a peak distribution of male and female students of the Study at 18 years of age.

Johnston, Cheeseman and Merritt made a similar survey at Queen's University of Belfast in 1949-54 (28), and followed with a further survey by Johnston and Merritt in 1962 (29).

Comparison of the findings of this Study and the surveys at Queen's University of Belfast are shown in Fig. 2A. and Tables 8a and 8b.

Males

Age	16	17	18	19	20 & 20+
This Study	0.4%	24.2%	47.3%	17.7%	10.3%
Queen's - 1949-54	-	15.8%	43.9%	19.7%	20.5%
Queen's - 1962	-	11.8%	42.4%	23.7%	22.2%

Table 8a.

Females

Age	16	17	18	19	20 & 20+
This Study	1.3%	36.0%	51.1%	7.5%	3.9%
Queen's - 1949-54	-	20.8%	51.2%	17.1%	10.9%
Queen's - 1962	-	21.9%	52.2%	13.8%	12.2%

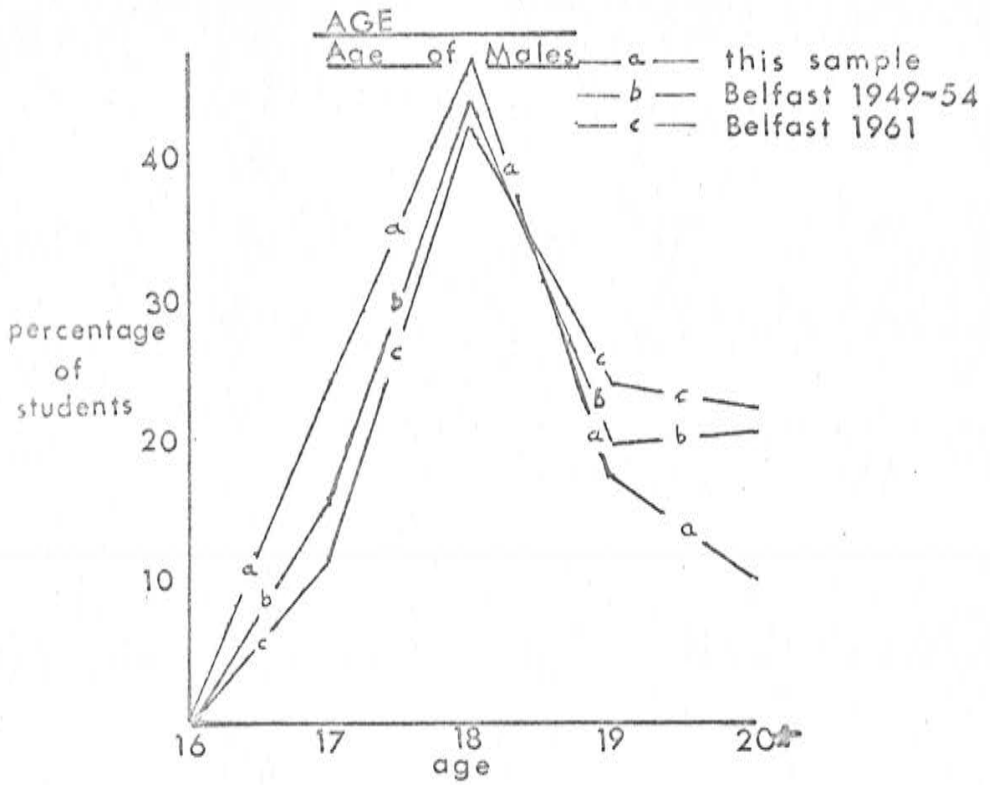
Table 8b.

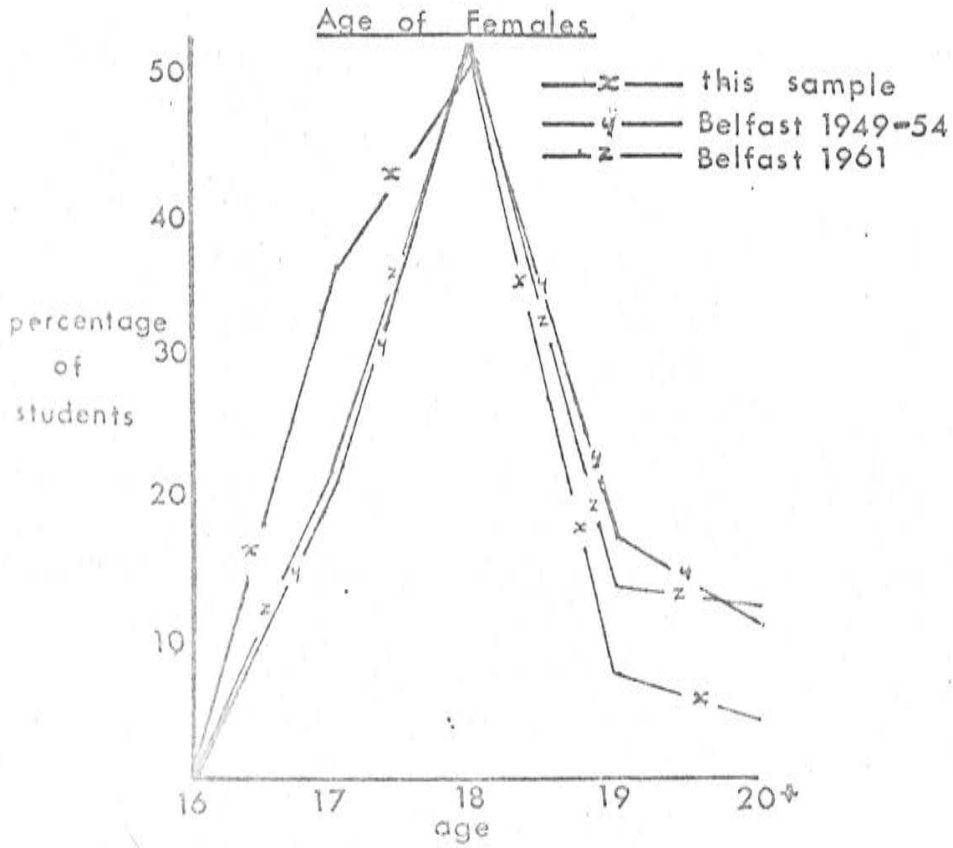
2.23 (cont)

Tables 8a. and 8b. and Figs. 2A. and 2B. show a peak age distribution in male and female students of the surveys at 18 years.

At the age of 17 years, more male and female students enter this University than at Queen's University of Belfast, but at the age of 19 the opposite situation appears.

This cannot be confirmed statistically because of lack of raw numbers in the Belfast Study.


AGE
Age of Males
a — this sample
b — Belfast 1949-54
c — Belfast 1961
40
30
20
10
percentage of students
16
17
18
19
20
age


Age of Females
x — this sample
y — Belfast 1949-54
z — Belfast 1961
50
40
30
20
10
percentage of students
16
17
18
19
20
age

FIGS 2A

2.23 (cont)

Summary.

A peak distribution of the age of male and female students in this Study occurs at 18. Analysis of the number of male and female students at the age of 16 and 17 years suggests that female students commence at an earlier age at the University than male students. This is confirmed by the fact that 24.6% of males at the time of examination were 16 or 17 years, and 37.3% of females were of those ages. A significant increase in males of the age of 19 years, when compared to female students of that age, is suggested.

The peak distribution of the age of 18 years of this Study appears to follow the same pattern of the surveys at Queen's University of Belfast. A non-statistical comparison of the surveys at the University of Adelaide and Queen's University of Belfast suggests a variation in that more students attend the University of Adelaide at the age of 17 years.

2.24. Area of Birth of Students.

Procedure.

The student indicated the country of Birth when completing the Student Health Service Form.

Results.

The results of this survey are shown in Table 9.

Area of Birth	Males	Females	Total	% of Study
Australia	797	275	1,072	71.5%
United Kingdom	90	33	123	8.2%
New Zealand	1	1	2	0.1%
Western Europe	95	37	132	8.8%
Southern Europe	40	7	47	3.1%
Eastern Europe	10	3	13	0.9%
Malaysia and Singapore				
Chinese	57	10	67	4.5%
Indian	4	1	5	0.3%
Hong Kong	9	-	9	0.6%
Indonesia	4	1	5	0.3%
Other areas	21	4	25	1.7%
Total	1,128	372	1,500	

Table 9.

Discussion.

There are insufficient students, born in New Zealand and Singapore (Indians), Hong Kong and Indonesia in the Study,

2.24 (cont)

to submit these to statistical analysis.

In the analysis of students from the remaining areas of birth, it appears that there is no variation in the male/female ratio.

Two aspects of the Area of Birth of students are discussed -

2.24-1. The age of students from the various Areas of Birth.

2.24-2. A comparison with the area of birth of students, and the estimated population in Australia in respect to the area of birth.

2.24-1. Age of Students and Area of Birth.

The details of Area of Birth and Age are shown in Appendix 7. Appendix 7 suggests the following maximum peaks -

18 years - Males and Females - Born in
Australia.
United Kingdom.
Western Europe.
Eastern Europe.
- Males - Born in 'Other Areas'.
- Females - Born in Southern Europe.

2.24 (cont)

19 years - Males - Born in Southern Europe.

- Females - Born in 'other areas'.

20 and 21 years - Born in South East Asia.

2.24-2. Comparison area of birth of the total Population and First Year Students.

Population statistics are recorded in 'The Australian' of 19 December 1966 (30). It is recognised that there may be a variation in the incidence of the 16-23 year old group in those born in Australia and in those who have migrated to Australia. By the laws of chance and by the fact that many migrants are approaching twenty years of residence in Australia, it may be assumed that the 16-23 year old groups would have the same population ratio.

Population quoted from 'The Australian ' (30) -

Total Population of Australia	- 11,500,000 (100%)
Australian Born	- 9,400,000 (81.7%)
Migrants to Australia	-2,100,000 (18.3%)

It was estimated that 2,500,000 Migrants had been attracted to Australia since 1946, and 400,000 had left.

2.24 (cont)

Estimated migrants -

United Kingdom - 1,180,000 (10.3% of total population)

Europe, America, Africa and Asia - 920,000 (8.0% of total population)

This latter group includes:

Dutch, German, Austrian (Western Europe) - 162,000 (1.4% of total population).

Polish, Ukrainian, Hungarian and Eastern Baltic Countries (Eastern Europe) - 138,100 (1.2% of total population).

Italian, Greek and Jugoslav (Southern Europe) - 447,200 (3.9% of total population).

Comparison of percentage of Area of Birth of Students and the total Population are shown in Table 10.

Area of Birth	% of population	% of study.
Australia	81.7%	71.5%
United Kingdom	10.3%	8.2%
Western Europe	1.4%	8.8%
Southern Europe	3.9%	3.1%
Eastern Europe	1.2%	0.9%

Table 10.

Statistical analysis of the figures suggests that the patterns of the total Australian population

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2.24 (cont)

and the Study are the same for Southern and Eastern Europe, but Australian and United Kingdom students show a lower incidence than would be expected from the pattern of the population. (Australian $P < 0.001$. United Kingdom $0.02 > P > 0.01$). It would appear that the incidence of Students born in Western Europe is greater than that expected from the pattern of the population. ($P < 0.001$).

Summary.

The Area of Birth of Students has been considered.

Certain areas had insufficient sample to test for significance, but Students born in Australia, United Kingdom, Western Europe, Eastern and Southern Europe, Malaysian and Singapore Chinese, and students from 'other areas' show no variation in the male/female ratio.

The age of students born in particular areas have been compared. Male and female students from Australia, United Kingdom, Western and Eastern Europe show a peak age of 18 years in the distribution curve. Males born in 'other areas' and females born in Southern Europe show a similar age peak. However male students born in Southern Europe show a peak at 19 years, as do female students from 'other areas'. Students from South East Asia have a peak in the age distri-

2.24 (cont)

bution curve at 20 to 21 years.

Comparison of the patterns of Area of Birth of students in this sample and Area of Birth of the Population suggests that less Australian and United Kingdom born students of the 16 to 24 year old group attend the University than would be expected from the general population. More students who were born in Western Europe appear to attend the University as gauged by the pattern of this group in the population of Australia. (1.4% of the population were born in Western Europe, whereas Western Europe was the birthplace of 8.8% of this 1,500 student sample at the University.)

Summary of Chapter 2.

The method of assessment of the emotional state of students has been described.

The second part of this Chapter has considered the basic data of the student sample.

75.2% of students in the Study were Males, and 24.8% Females.

It was found that courses with a professional basis are more often studied by male students, while those courses involving the humanities are more often read by females.

18 years appears the most popular age for male and female students to start at the University. There are more female students aged 17 years, and more males aged 19 years.

Comparison has been made with First year Students at Queen's University of Belfast from published surveys of 1949-54 and 1962.

There was no difference in the sex ratio in the various areas of birth of students.

Students from South East Asia appear to start at a later age (20 to 21 years), when compared to Australian and European Students.

It has been found that fewer students born in Australia and the United Kingdom attend the University than would be expected from the pattern of the total population, but a

Summary of Chapter 2 (cont)

greater number of students from Western Europe attend than would be expected from the pattern of the total population.

CHAPTER 3.

HISTORY OF FAMILY.

3.00. Introduction.

3.10. Occupation of father.

3.20. Occupation of mother.

3.30. Parents' occupation and Faculty of student.

3.40. Age of parents.

3.50. Illness of parents.

3.51. Mortality.

3.52. Morbidity.

3.60. Divorce and Separation of parents.

3.70. Siblings.

3.71. Position of student in family, and number in Family.

3.72. Death of sibling.

Summary.

3.00. INTRODUCTION.

The occupation, age, illness, and divorce or separation of parents are considered in this Chapter, as well as the number of siblings in the students' families and the deaths of any siblings.

Procedure.

The medical and environmental History of parents and siblings was given by the student on the History Sheet of the 'Student Health Service Form', and by questioning of the student in the completion of the 'Performance Sheet'.

3.10. OCCUPATION OF THE FATHER.

Introduction and Procedure.

The occupation of the father has been divided into eight broad categories, which are -

Professional - a father who has a University degree or who holds a Diploma from a University or Institute of Technology.

Semi-professional - a father who is a company executive, or Bank or Insurance Staff Officer.

Clerical - a father who is a member of the Public Service, or who holds a clerical position in a private company. This group includes the Police, and the Army.

Own business.

Skilled Tradesman.

Semi-skilled Tradesman.

Unskilled labourer.

Occupation not known.

Results - The occupation of fathers of students in the Study.

Occupation	Males	Females	Total	% of Total
Professional	233	103	336	22.4%
Semi-professional	129	55	184	12.3%
Clerical	231	56	287	19.1%
Own Business	237	88	325	21.7%
Skilled	213	47	260	17.3%
Semi-skilled	44	11	55	3.7%
Unskilled	34	9	43	2.9%
Not known	7	3	10	0.6%

Table 11.

3.10 (cont)

Discussion.

Analysis of the data in Table 11 suggests that more female students of professional fathers attend the University ($0.05 > P > 0.02$), but less female students attend when their fathers are skilled tradesmen ($0.05 > P > 0.02$). However these variations are not evident in male students.

Davies and Encel (31) in the book 'Australian Society' detail a survey of the occupations of males in the work force during 1947 and 1961. Their findings are compared with the data of the occupations of the fathers of the sampled students in Table 12. Some variation of the classification has occurred in the three surveys. In the 1947 survey, professional, semi-professional and administrative have been grouped together, as have commercial and clerical, rural, fishing with own business. In the 1961 survey, skilled and semi-skilled tradesmen, transport workers and unskilled labourers have been grouped together. The Services in both surveys have been grouped with clerical.

3.10 (cont)

Fathers' Occupation	% in this Study		% in 1947 Survey		% in 1961 Survey	
Professional	22.4%	34.7%	9.1%		6.6%	14.6%
Semi-professional	12.3%				8.0%	
Clerical	19.1%	40.8%	40.7%		18.9%	33.7%
Own Business	21.7%				14.8%	
Skilled	17.3%	23.9%	20.0%	47.2%		50.6%
Semi-skilled	3.7%		20.7%			
Unskilled	2.9%		6.5%			
Not stated	0.6%		3.0%		1.1%	

Table 12.

If the professional and semi-professional groups are considered, the data shows that 34.7% of such fathers of the sampled students are in these occupations which compares to 9.1% of the 1947 survey, and to 14.6% of the 1961 survey, both of which were conducted by Encel and Davies.

A similar comparison in the combined 'clerical' and 'own business' groups shows -

This Study - 40.8%

1947 Survey (Encel and Davies) - 40.7%

1961 Survey (Encel and Davies) - 33.7%

These findings are similar.

If skilled, semi-skilled and unskilled workers are considered in one group, the surveys show -

3.10 (cont)

This Study - 23.9%

1947 Survey (Encel and Davies) - 47.2%

1961 Survey (Encel and Davies) - 50.6%

Comparison of these survey findings are shown in Fig. 3.

Fig. 3 and Table 12 indicate that students have more professional and semi-professional fathers than in the pattern of the general male work force in Australia. On the contrary, fewer students have fathers with the occupations 'skilled and semi-skilled tradesmen' and 'unskilled workers'.

Table 11 shows that the highest percentages of fathers of the student sample have occupations 'professional', 'own business' 'clerical' and 'skilled tradesman'.

OCCUPATIONS OF FATHERS

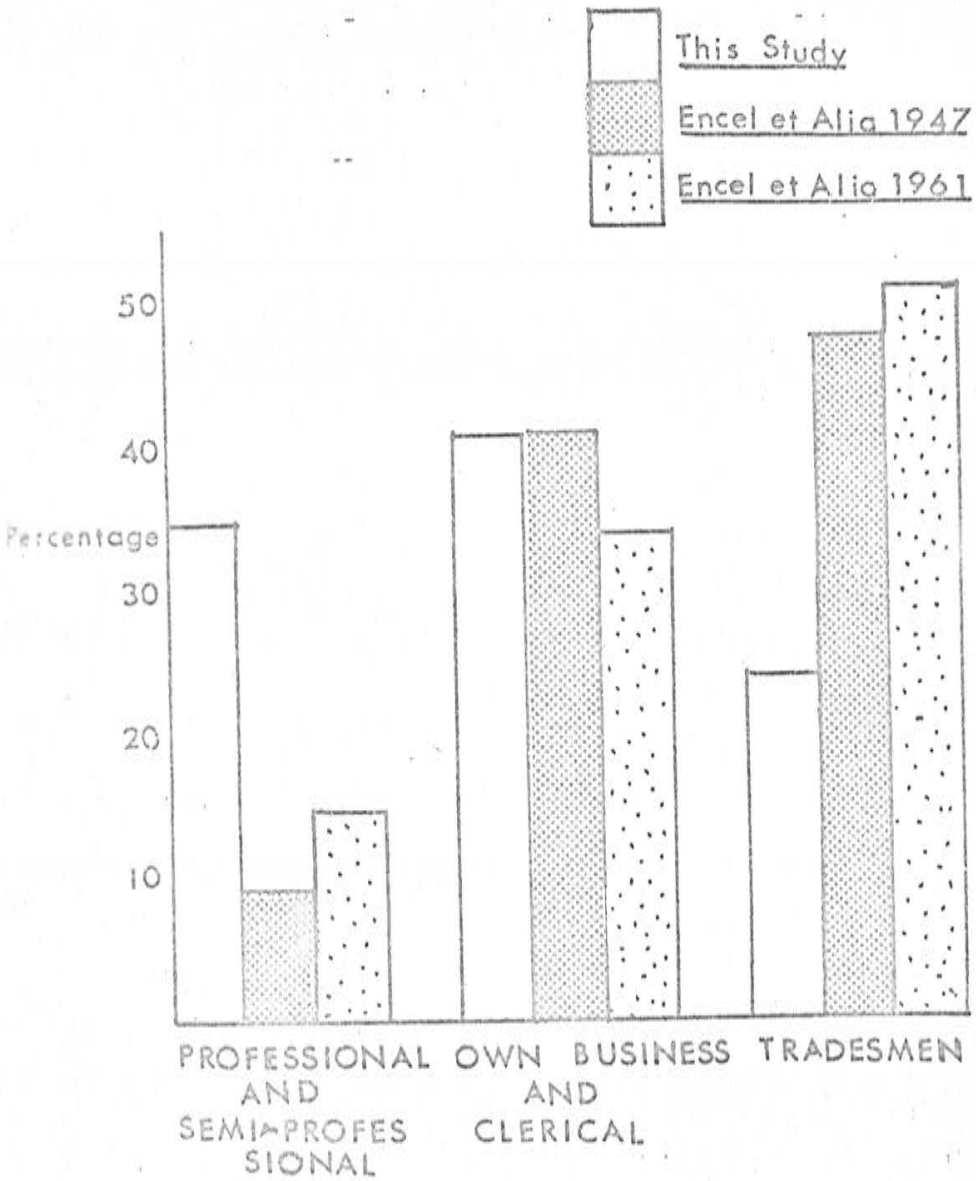


FIG 3

3.10 (cont)

Summary.

Two aspects of the occupations of fathers have been considered;

i. The highest percentages of fathers of these students have the occupations 'professional', 'own business', 'clerical', and 'skilled worker' groups. Female students are more likely to have professional fathers than male students.

ii. When compared with the patterns of occupations of the male work force of the Australian community, the occupations of fathers of these students show an increase in the number of the 'professional' and 'semi-professional' groups. The reverse position has been found in fathers in the occupational groups 'Skilled, semi-skilled and unskilled tradesmen'.

3.20. OCCUPATION OF THE MOTHER.

Introduction and Procedure.

The occupation of the mother of students has been divided into five groups.

These categories are:

Home Duties, no tertiary education.

Working, no tertiary education.

Home duties, tertiary education.

Working, tertiary education.

Not known.

This information has been obtained by questions asked during the completion of the 'Performance Sheet'.

Results.

The Occupation of mothers of the student sample.

Occupation	Males	Females	Total	% of total
Home, no tertiary education	732	205	937	62.5%
Working, no tertiary education	168	58	226	15.1%
Home, tertiary education	137	64	201	13.4%
Working, tertiary education	91	44	135	9.0%
Not known	-	1	1	

Table 13.

1.10 (cont)

Discussion.

Analysis of the data in Table 13 suggests that more female students whose mothers have the occupation 'home duties, tertiary education' attend the University ($0.05 > P > 0.02$).

Davies and Encel (32) show that 13% of married women were working in 1954. This compares with 24.1% of mothers of these students who are working.

75.9% of the mothers of this student sample are engaged/only in home duties as a sole occupation.

Summary.

Where the occupation of the mother is 'home duties, tertiary education', it appears that the daughter is more likely to be studying at the University.

It has been found that a higher percentage of mothers of this sample work, when compared to available figures of the situation in the Australian community.

75.9% of mothers of these students have the sole occupation of 'home duties'.

3.30. PARENTS' OCCUPATION AND FACULTY OF STUDENTS.

Introduction and Procedure.

The Faculty of the student is considered with the occupation of the father, and then with the occupation of the mother. The data has been gained by questions asked at the time of the completion of the 'Performance Sheet'.

Results.

Appendix 8, Page 2 shows the relationship between occupations of fathers and Faculties of students.

Appendix 8, Page 3 shows the relationship between occupations of mothers and Faculties of students.

Discussion.

Analysis of the Table of Fathers' occupation and Faculties of students suggest that -

i. Students with 'professional fathers' show a preference for the courses of Architecture ($0.05 > P > 0.02$) and Medicine ($0.05 > P > 0.02$), whereas the reverse trend is noticed in the course of Economics. ($0.05 > P > 0.02$).

ii. Students with 'semi-professional fathers' show a preference for the courses of Economics ($0.05 > P > 0.02$) and Physiotherapy ($0.05 > P > 0.02$). The opposite trend is shown in the courses of Agricultural Science ($0.05 > P > 0.02$) and Engineering ($0.05 > P > 0.02$).

3.20 (cont)

iii. Students whose fathers conduct their 'own business' show a preference for Agricultural Science ($0.01 > P > 0.001$).

iv. Students with 'skilled father tradesmen' seem to prefer the course of Science ($0.02 > P > 0.01$), but show an opposite trend in avoiding Law ($0.05 > P > 0.02$)

v. Students with 'unskilled fathers' show some preference for the Engineering course ($0.05 > P > 0.02$).

vi. Students with 'clerical' and 'semi-skilled' fathers show no preference for any particular course.

When the occupation of the mother and Faculty of the student are analysed, the following suggestions are made -

i. Students whose mothers work and have no tertiary education prefer the course in Pharmacy ($0.05 > P > 0.02$

ii. Students whose mothers work and have a tertiary education prefer Medicine ($0.05 > P > 0.02$).

iii. The other occupations of the mothers show no preference to any particular course, taken by these students.

Summary.

The occupations of fathers and mothers have been considered with the Faculty of students.

It has been found that -

More Architectural and Medical students come from homes

3.20 (cont)

where the father has a 'professional' occupation, while fewer Economics students come from such homes. Similarly more Economics and Physiotherapy students and fewer Agricultural Science and Engineering students come from homes where the father has a 'semi-professional' occupation.

More Agricultural Science students have fathers in their 'own business'.

Students of 'skilled tradesmen' show a preference for the course of Science, but not Law. Students of 'unskilled workers' show a greater number, than expected, studying Engineering.

More Pharmacy students have mothers with the occupation 'working with no tertiary education', while more Medical students come from homes where the mother works having had a tertiary education.

3.40. THE AGE OF PARENTS.

Procedure.

The age of parents was recorded on the 'Student Health Service Form' by the student.

Results.

Mean age of fathers - Living - Male students - 50.8 years

Female students - 49.5 years

Dead - Male students - 49.8 years (age of death)

Female students - 48.9 years

Mean age of mothers - Living - Male students - 46.5 years

Female students - 45.6 years

Dead - Male students - 45.5 years (age of death)

Female students - 42.3 years

Discussion.

There is no evidence of a difference in the ages of fathers of male and female students ($0.70 > P > 0.50$). Similarly there is no difference in the ages of mothers of male and female students ($0.80 > P > 0.70$).

3.50. ILLNESS OF PARENTS.

Introduction and Procedure.

Illness of parents was recorded by the student in Part B of the 'Student Health Form' in 12 categories, which are -

1. Allergies (Asthma, Hay Fever, and Skin Allergies).
2. Cancer.
3. Chronic arthritis (including gout).
4. Diabetes.
5. Fits, mental illness and suicides.
6. Heart disease.
7. High blood pressure.
8. Lung complaint.
9. Peptic ulcer.
10. Rheumatism, rheumatic fever.
11. Tuberculosis.
12. Other serious illness - including accidents, injury at war, encephalitis, poliomyelitis and neurological diseases.

As some students had no knowledge of the illness of parents, a further classification of 'not stated' was added.

3.51. Mortality of Parents.

Results.

Causes of Death of Parents

Disease	Fathers	Mothers
1. Allergies (Asthma)	-	1
2. Cancer	14 (16.1%)	17 (60.7%)
3. Chronic arthritis	1	-
4. Diabetes	1	1
5. Mental illness	5	1
6. Heart disease	31 (35.6%)	3 (10.7%)
7. High blood pressure	5 (6.1%)	1 (3.6%)
8. Lung disease	4	-
9. Peptic ulcer	2	1
10. Rheumatism, rheumatic fever	-	-
11. Tuberculosis.	1	-
12. Other serious illness.	20	3
Not stated	3	-
Total	87	28

Table 14.

Discussion.

The data shows that 16.1% of students' fathers who died did so as a result of cancer, whereas 60.7% of the mothers' deaths were due to this cause.

41.7% of fathers' deaths resulted from vascular

3.51 (cont)

disease (heart - 35.6% and high blood pressure - 6.1%), and 14.3% of mothers' deaths were due to this cause (heart - 10.7% and high blood pressure - 3.6%).

Cancer accounted for deaths in 1.1% of all mothers and 0.9% of all fathers, and vascular disease 0.3% of all mothers and 2.1% of all fathers.

The rate of death from cancer shows a similarity in fathers and mothers, but fathers show a death rate from vascular disease at a rate of seven times that of mothers.

5.8% of fathers and 1.9% of mothers had died at the time of the medical examination of these students.

3.52. Morbidity of Parents.

Results.

Illnesses of Parents living.

	Disease	Fathers	Mothers
1.	Allergies - Asthma	19	14
	- Hay Fever	10	17
2.	Cancer	7	17
3.	Chronic arthritis	22	20
4.	Diabetes	24	12
5.	Mental illness	12	16
6.	Heart disease	50	18
7.	High blood pressure	59	67
8.	Lung disease	16	15
9.	Peptic ulcer	45	14
10.	Rheumatism, rheumatic fever	16	24
11.	Tuberculosis	9	7
12.	Other serious illness	51	56
	Not stated	18	33
	Total	358	330
	Total living	1413	1472

Table 15.

Discussion.

Examination of Table 15 suggests that -

i. Fathers show a greater tendency to illness ($0.05 > P > 0.02$).

3.52. (cont)

ii. Asthma, chronic arthritis, mental illness, high blood pressure, lung disease and tuberculosis occurs with the same frequency in mothers and fathers of students.

iii. Hay fever, cancer and theumatism in some form occurs more frequently in mothers (hay fever - $0.05 > P > 0.02$, Cancer - $P < 0.001$, and rheumatism - $0.05 > P > 0.02$). Fathers suffer more frequently from diabetes, heart disease and peptic ulceration (Diabetes - $0.01 > P > 0.001$, Heart disease - $P < 0.001$, and peptic ulcer - $P < 0.001$).

Davidson (33) confirms the findings noted about diabetes, when he states that 'there are rather more young male diabetics than females, but in middle age women are more often affected'. The findings are in keeping with well known sex differences in morbidity in Western Societies.

Summary - Deaths and Illness of Parents.

5.8% of fathers and 1.9% of mothers of these students had died before the time of the medical examination.

The findings show that, of the parents who died, 16.1% of fathers and 60.7% of mothers died from cancer, and 41.7% of fathers and 14.3% of mothers from vascular disease.

When all the fathers and mothers of the students in this sample are considered, the frequency of deaths from cancer is similar in male and female parents, whereas fathers died of vascular disease at 7 times the rate of mothers.

The findings indicate that mothers suffer from hay-fever, cancer and rheumatism more than fathers who are more likely to suffer from diabetes, heart disease and peptic ulceration.

3.60. DIVORCE OR SEPARATION OF PARENTS.

Procedure.

Divorce or separation is recorded when one parent did not live in the home which the student gave as his or her permanent home.

Results.

Divorce or Separation

		Father		Mother	
Divorce	Male students	13	Male students	6	
	Female students	14	Female students	3	
		27		9	
Separation	Male students	5	Male students	1	
	Female students	4	Female students	2	
		9		3	

Table 16.

Discussion.

More fathers (2.4%) are living away from the permanent home of students through divorce or separation than mothers (0.8%).

The divorce or separation rate of parents of female students is greater than that seen in male students. This finding is significant ($P < 0.001$).

3.70. SIBLINGS OF STUDENTS IN THE STUDY.

Introduction.

Two aspects of Siblings are considered -

i. Position of students and the number in the family.

ii. Death of Siblings.

Procedure.

The position and number in the family of students were gained from information given on the 'Student Health Service Form', confirmed by further questioning at the time of completion of the 'performance Sheet'.

Results.

3.71. i. Position of Students in relation to the number in the Family.

Male Students.

Number in Family	Position of Student in Family 1.	2.	3.	4.	5.	6.	7.	8.	9.	Total	% of Total
1.	98									98	8.7%
2.	178	143								321	28.5%
3.	134	111	84							329	29.2%
4.	78	50	39	36						203	18.0%
5.	30	23	21	6	14					94	8.3%
6.	11	9	8	2	3	2				35	3.1%
7.	5	4	2	4	1	3	4			23	2.0%
8.	2	2	2	1	3	-	-	-		10	0.9%
9.	1	1	1	1	1	-	-	2	1	8	0.7%
10.	-	-	-	-	-	1	1	-	-	2	0.2%
11.	-	-	-	-	-	-	-	1	1	2	0.2%
12.	-	-	-	-	-	1	-	-	-	1	0.1%
14.	-	1	-	1	-	-	-	-	-	2	0.2%
Total	537	344	157	51	22	7	5	3	2	1,128	
% Total	47.7%	30.4%	13.9%	4.5%	1.9%	0.6%	0.4%	0.3%	0.2%		

Table 17 A.

3.71 (cont)

Female students

Position of student in Family

		1.	2.	3.	4.	5.	6.	7.	11.	Total	% of Total
	1.	42								42	11.3%
Number	2.	64	49							113	30.4%
	3.	38	35	23						96	25.8%
in	4.	20	23	12	11					66	17.7%
	5.	10	5	7	2	5				29	7.8%
Family	6.	4	5	2	-	-	-			11	3.0%
	7.	1	2	1	2	-	-	-		6	1.6%
	8.	-	1	-	-	1	2	-		4	1.1%
	11.	1	-	1	-	-	-	-	1	3	0.8%
	12.	-	-	-	-	-	-	-	1	1	0.3%
	13.	-	-	-	1	-	-	-	-	1	0.3%
Total		180	120	46	16	6	2	-	2	372	
% Total		48.3%	32.3%	12.4%	4.3%	1.6%	.5%		.5%		

Table 17B.

Discussion

Analysis of Table 17A and 17B suggests that there is no significant variation of pattern in either the number in families or the position of students in those families, when male and female students are compared.

It is noted that 47.7% of males and 48.3% of females in this sample are the first child of the families.

When the number in the families of male and female students are considered, it is found that the peak of both distribution curves is between 2 to 3 children.

3.72. ii. Death of Siblings.

In 1,128 families of male students, 27 siblings had died (2.4%).

In 372 families of female students, 12 siblings had died (3.2%).

There appears no significant difference on statistical testing of deaths of siblings of Male and Female Students.

Summary of Chapter 3.

3.10. The pattern of occupations of fathers of the student sample shows an increase in the number of professional and semi-professional groups, when compared to the pattern of occupations of the male work force in the general Australian population. The opposite position has been found in fathers of the student sample with the occupational groups, skilled, semi-skilled and unskilled tradesmen.

The highest percentages of fathers of the student sample have the occupations 'professional', 'own business', 'clerical', and 'skilled worker' groups.

3.20. In this sample, the daughter of the mother with the occupation 'home duties, tertiary education' has a greater chance of attending the University.

It has been found that a higher percentage of the mothers of these students work, when compared with figures of the general Australian population. 75.9% of the mothers of these students have the occupation 'home duties'.

3.30. Comparison of the Faculty of students in this sample with the occupations of fathers and mothers shows that -

More Architecture and medical students but fewer Economics students come from homes where the father has a 'professional' occupation.

More Economics and Physiotherapy students and fewer Agricultural Science and Engineering students have fathers

Summary of Chapter 3 (cont)

with a 'semi-professional' occupation.

More Agricultural Science students have fathers in their 'own business'.

A greater number of students studying Science and fewer Law students come from homes where the father has the occupation 'skilled tradesman'.

Students of 'unskilled workers' show a greater number than might be expected undertaking the Engineering course.

More Pharmacy students have mothers with the occupation 'working, no tertiary education', while more Medical students come from homes where the mother works and has a tertiary education.

3.40. The mean age of living fathers of these male students is 50.8 years, and of these female students 49.5 years.

The mean age of living mothers is - male students 46.5 years, and female students 45.6 years.

3.50. 5.8% of fathers and 1.9% of mothers of these students had died before the time of the medical examination.

The findings show that, of the parents who died, 16.1% of fathers and 60.7% of mothers died from cancer, while 41.7% of fathers and 14.3% of mothers died from vascular disease.

When all the fathers and mothers of the students in the sample are considered, the frequency of deaths from cancer is similar in male and female parents, whereas

Summary of Chapter 3 (cont)

fathers died from vascular disease at seven times the rate of mothers.

The findings indicate that mothers suffer from hay-fever, cancer and rheumatism more than fathers who are more likely to suffer diabetes, heart disease and peptic ulceration

3.60. More fathers (2.4%) are living away from the permanent home of the students through divorce or separation than mothers (0.8%).

The divorce or separation rate of parents of female students is greater than that seen in male students.

3.70. 47.7% of males and 48.3% of females of this student sample are the first child of the family.

The peak of the distribution curves of the number in the families of the male and female students of this sample appears between 2 to 3 children.

CHAPTER 4.

STUDENTS' PERSONAL AND ENVIRONMENTAL HISTORY.

4.00. Introduction.

4.10. Home of student.

4.20. Domicile of Student during the University Year.

4.30. History of Previous Illness.

4.40. Smoking.

4.41. Overall situation.

4.42. Faculty of Student who smokes.

4.43. Occupation of Parents of students who smoke.

4.44. Type of secondary school attended by students who smoke.

4.45. Home of Parents of students who smoke.

4.46. Domicile of students who smoke.

4.47. Death, separation or divorce of Parents, and the relation to the smoking habit of students.

4.48. Area of Birth of Students who smoke.

4.49. Type of smoking.

Summary of the Smoking Habits of Students.

4.50. Alcohol.

4.51. Number and Sex of Students who drink alcohol.

4.52. Faculty of student who drinks alcohol.

4.53. Occupation of Parents of students who drink alcohol.

STUDENTS' PERSONAL AND ENVIRONMENTAL HISTORY (cont)

4.54. Domicile of student in the habit of taking alcohol.

4.55. Secondary school attended by students who drink alcohol.

4.56. Area of Birth of Students who drink alcohol.

Summary.

4.60. Sport and Exercise.

4.61. Students taking neither sport nor exercise.

4.62. Students taking exercise.

Summary.

4.70. Habits of Relaxation of Students.

4.71. Relaxation at week-ends.

4.72. Relaxation at Study Breaks.

Summary.

4.80. Study Habits, Periods of Study at night.

Summary - Chapter 4.

4.00. INTRODUCTION.

This chapter discusses environmental and social aspects of these students. Those include the permanent home of the student, his or her domicile during the University year, the history of previous illness, the habits of smoking and drinking alcohol, sport and exercise played or not played by students, relaxation both at the week-end and between study periods, and the pattern of study habits of students during the evening or early morning.

A general picture of the lives of these students can be obtained from such information.

Procedure.

The history of previous illness was obtained by the student completing the 'Student Health Service Form'. The other aspects were obtained by questioning the student as the 'Performance Sheet' was completed by the medical officer.

4.10. HOME OF STUDENT.

Introduction and Procedure.

The place of the home of the student was classed into the following -

Home in Metropolitan Area. -

High Rate Section. Residential areas in the foothill suburbs and Areas of Walkerville and Medindie. The council ratings in these areas are high.

Medium Rate Section. Residential areas along and adjacent to the seafront, areas between the foothills suburbs and the City of Adelaide, the Northern Suburbs excluding Walkerville and Medindie, and including new housing areas of Modbury and Elizabeth. It also includes the Blackwood Area in the near hills. The council ratings in these areas are moderate.

Low Rate Section. Old established areas with industrial infiltration. These areas include Adelaide, Hindmarsh, Mile End, Goodwood, Parkside and some parts of Norwood. These sections are shown in Appendix 9, in a map of the Adelaide Suburban area.

Home in Country. -

In a Country Town.

Rural. It is noticed that some students travel daily from their homes in the country which is close to the Metropolitan Area.

4.10 (cont)

Home Interstate.

Home Overseas.

Results.

Home of Students.

Sex	Metropolitan			Country		Inter state	Over seas
	High	Medium	Low	Town	Rural		
Male	205	480	175	107	53	31	77
Female	94	147	50	20	39	9	13
Totals	299	627	225	127	92	40	90
%	19.9%	41.8%	15.0%	8.5%	6.1%	2.7%	6.0%

Table 18.

Discussion.

41.8% of students in this sample have their homes in the Medium Rate Section of the Metropolitan Area.

If the male/female distribution is considered, the data from Table 18 suggests that this ratio in the 'Medium' and 'Low' Rate sections of the Metropolitan Area is that which might be expected, and this also applies to 'Interstate' students. The observed incidence of female students from the 'High' Rate section appears to exceed that which might be expected, ($0.01 > P > 0.001$), and a similar situation is seen

4.10 (cont)

in female students from the 'Country Rural' area. ($0.02 > P > 0.01$). The opposite situation appears in 'Country Towns' and 'Overseas' where the male students show an increased incidence. (Country Town $0.02 > P > 0.01$, and Overseas $0.05 > P > 0.02$).

It would appear likely that female students of the wealthier economic groups, with homes in the High Rate Section of the Metropolitan Area and the Rural Country, are encouraged to attend the University. It might also be suggested that economic reasons influence the parents of students in Country Towns to give a preference to their sons gaining a University education, rather than their daughters. This suggestion probably also applies to students from Overseas.

Summary.

The largest percentage of students in this sample (41.8%) come from homes in the Medium Rate Section of the Metropolitan Area.

Female students from the wealthier economic groups of the High Rate Section of the Metropolitan Area and Rural Country seem to be encouraged to attend the University.

Parents living in Country Towns and Overseas prefer to give a tertiary education to their sons.

4.20. DOMICILE OF STUDENT DURING THE UNIVERSITY YEAR.

Introduction and Procedure.

Students live in one of the following domiciles -

Living Home

Living in University College

Living in Lodgings

Living in Flats (caring for themselves).

The findings were made by the use of the 'Performance Sheet'.

Results.

The findings are detailed in Appendix 10, where a comparison is made of the Home of the Parents, Domicile of the Student and the Faculty of the Student.

From Appendix 10, a comparison is shown in Table 19A for Male Students and 19B for Female Students.

Home of Parent and Domicile of Student

Males

Domicile	Metropolitan Area			Country		Inter state	Over seas
	High	Medium	Low	Town	Rural		
Home	89.3%	97.9%	99.4%	16.8%	15.1%	-	-
University College	10.2%	1.0%	0.6%	31.8%	30.2%	61.3%	28.6%
Lodgings	0.5%	0.8%	-	46.7%	54.7%	35.5%	26.0%
Flats	-	0.2%	-	4.7%	-	3.2%	45.4%

Table 19A.

4.20 (cont)

Home of Parent and Domicile of Student.

Females

Domicile	Metropolitan Area High	Medium	Low	Country Town	Rural	Inter state	Over seas
Home	95.6%	97.3%	100%	-	12.8%		
University College	4.4%	0.7%	-	25.0%	30.8%	55.6%	15.3%
Lodging	-	1.3%	-	70.0%	53.8%	44.4%	61.5%
Flats	-	0.7%	-	5.0%	2.6%	-	23.1%

Table 19B.

Discussion.

The data in Tables 19A and 19B shows that students of this sample living in the Metropolitan Area prefer to live at home during the University year. This preference appears to especially applicable to students whose homes are in the 'Low Rate Section' (Males - 99.4% and Females - 100%) and in the 'Medium Rate Section' (Males - 97.9% and Females - 97.3%). A smaller percentage of the students from the 'High Rate Section' live at home (Males - 89.3% and Females - 95.6%). These latter students show an increased tendency to live in University Colleges (Males - 10.2% and Females - 4.4%).

A majority of Country students prefer to live in Lodgings and this preference is most noticeable in Female students from Country Towns (70.0%).

4.20 (cont)

No female student travelled daily from a home in a Country Town to the University, but 12.8% of females from the Rural Country made a trip to the University each working day. The possibility that economic factors may cause this variation was supported by the fact that many of these female students from the Country Rural Areas used cars to travel to work each day. It appears noteworthy that male and female students from Country Towns lived in Flats to a greater extent than students from Rural Country.

Interstate students prefer living in University Colleges (61.3% males and 55.6% females) while their next preference was to live in Lodgings (35.5% males and 44.4% females).

Overseas students show a variation in pattern where males prefer Flats (45.4%) and females Lodgings (61.5%).

In considering the total Study, the Domicile of Students is summarised in Table 20.

Percentage of Domicile Type of Students of this Study.

Domicile	Males	Females
Home	75.7%	77.4%
University College	10.5%	7.8%
Lodgings	10.2%	13.2%
Flats	3.7%	1.6%

Table 20.

4.20 (cont)

The data of Table 20 indicates that more male students live at University Colleges than female students, while a similar position is found in students living in Flats. This latter situation is probably explained by the finding that Overseas Male students prefer to live in Flats.

Analysis of Appendix 10, when the Domicile and Faculty of Students are considered, suggests the following variations from the expected pattern.

Male Agricultural Science students prefer lodgings ($0.05 > P > 0.02$).

More male Economics students live in Flats ($P < 0.001$). This may be explained by a high percentage of Asian students studying Economics and preferring to live in Flats.

Similarly Engineering students show a preference to live in Flats ($0.05 > P > 0.02$), and this variation appears to have a similar relation to the Asian Students undertaking this course.

More male Law students live in University Colleges than may be expected ($0.05 > P > 0.02$), but they show a decreased tendency to live in Lodgings ($0.05 > P > 0.02$).

Male Technology students show the reverse tendency to the findings of male Law students (University Colleges - $0.05 > P > 0.02$, and Lodgings - $0.01 > P > 0.001$).

Less Female Arts students live in Lodgings ($0.01 > P > 0.001$).

4.20 (cont)

Summary.

Students from the Metropolitan Area prefer to live at home during the University year. This preference is greatest in students from the 'Low Rate' and 'Medium Rate' Sections while students from the 'High Rate' Section live in increased numbers in University Colleges. More male students live in University Colleges than female students.

Country students, from the Town and Rural areas, show a preference for 'Lodgings', whereas 'Interstate' students prefer to live in University Colleges.

Overseas Male students appear to live in greater numbers in Flats, but Female overseas students appear to appreciate the life and company found in 'Lodgings'.

4.30. HISTORY OF PREVIOUS ILLNESS AND INJURY.

Introduction and Procedure.

The student indicated the previous Medical History of illness and injury in Part D of the 'Student Health Service Form'.

At the interview before the physical examination such illness and injury were discussed so that omissions could be reduced. Students appeared to have a habit of 'forgetting' about an illness or injury.

The prevalence of previous illness and injury is discussed in this section, but the relationship between the History and the present state of physical health are considered in Chapter 5 - 'The Physical Health of Students'.

Table 21 shows the findings of the Medical History of these Students.

4.30 (cont)

Results.

Part D of the Student Health Service Form Shows -

	Illness	Number of cases
0.1	Tuberculosis	2
0.2	Spitting of Blood	4
0.3	Rheumatism	9
0.4	Rheumatic Fever	17
0.5	Asthma	78
0.6	Hay fever	333
0.7	Sore Throat	681
0.8	Frequent Colds	201
0.9	Earache	269
1.0	Ear Disease	70
1.1	Deafness	29
1.2	Chronic Cough	11
1.3	Lung Complaint	41
1.4	Pleurisy	13
1.5	Pneumonia	119
1.6	Fainting	30
1.7	Palpitation	7
1.8	Heart Disease	8
1.9	Fits	6
2.0	Nervous Breakdown	8
2.1	Stomach Trouble	81
2.2	Liver Trouble	35
2.3	Bowel Complaint	73
2.4	Piles	29
2.5	Rupture	21
2.6	Kidney or Bladder Trouble	23
2.7	Malaria	13
2.8	Other Tropical Disease	5
2.9	Typhoid Fever	5
3.0	Dysentery	21
3.1	Undiagnosed Fever	8
3.2	Poliomyelitis	20
3.3	Glandular Fever	66
3.4	Encephalitis or meningitis	4
3.5	Mumps	946
3.6	Measles (Morbilli)	1,239
3.7	German measles (Rubella)	498
3.8	Whooping Cough	197
3.9	Scarlet Fever	61
4.0	Diphtheria	3
4.1	Chicken Pox	973
4.2	Tumours or New Growths	12
4.3	Diabetes	2
4.4	Sport Injuries	426
4.5	Accidents	347
5.0	Appendicectomy	178
5.1	Tonsillectomy	485
5.2	Other operations	253

Table 21.

4.30 (cont)

Discussion of Table 21.

Tuberculosis. Both students were males who had this illness as young children. Pulmonary tuberculosis is considered in more detail in Chapter 7.

Spitting of blood. All of these students related this symptom to either epistaxis or injury to the mouth or nose.

Rheumatism. None of these students indicated a prolonged illness which required treatment in bed at home or hospital.

Rheumatic Fever. These 17 students received treatment in bed at home or hospital. The findings are discussed in Chapter 5, abnormal cardiac findings.

Asthma. These findings are considered in Chapter 5 under the following headings -

Last attack up to 10 years

Last attack - 11 to 14

Last attack - 15 to commencing at the University.

Still having attacks.

Hay fever. These attacks were of such severity that medical opinion was required.

Ear-ache. This grouping concerned attacks of acute otitis media.

4.30 (cont)

Ear disease. Cases involved acute otitis externa. The otitis externa resulted from fungal infection and swimming.

Deafness. These findings are compared with the findings of deafness at medical examination in Chapter 5.

Chronic cough. These students indicated many reasons for this sympton. They were 'smoking', 'sinus trouble', 'bronchiectasis'.

Lung Complaint. This group included students who had suffered from acute bronchitis.

Pleurisy in these students was invariably related to Pneumonia. The history of this latter illness at 8% of students appears high.

Fainting. Analysis shows that this symptom occured more frequently in the female students of the sample ($0.05 > P > 0.02$).

Heart disease is considered in Chapter 5.

Students who indicated Fits suffered from epilepsy. These students were under medical treatment for this illness.

Eight students had received treatment for Nervous Breakdown, and on further questioning these illnesses were of a psychotic nature.

4.30 (cont)

Stomach Trouble was variously interpreted as 'attacks of biliousness' to severe 'dyspepsia'. No student had an active peptic ulceration.

All the students with Liver Trouble had suffered from an attack of infective hepatitis.

The symptom 'Bowel Complaint' showed a variation from 'constipation' to 'summer diarrhoea'.

More females suffered from 'Kidney and Bladder Trouble' than males ($0.01 > P > 0.001$).

Ruptures are considered in Chapter 5.

Malaria and Typhoid Fever was noticed only in students from South East Asia, but Dysentery included both students from this Area and students from the Northern Area of Australia. No student gave a history of amoebic dysentery.

Poliomyelitis is considered in Chapters 5 and 7.

Glandular fever had a high incidence in these students at over 4%.

The incidence of previous illness from Mumps, Measles and Chicken Pox might be expected to be high, and this has been confirmed.

No case of Diphtheria was noted in Australian born students.

4.30 (cont)

Analysis of the area of birth of students who had suffered from Whooping Cough shows -

Australian	9.4%
United Kingdom	35.0%
Western Europe	26.5%
Southern Europe	4.3%
Eastern Europe	46.2%
Malaysia and Singapore	1.4%

The age of attack of this disease was not known so that it was impossible to ascertain whether the attack occurred before or after migration to Australia in the case of students born outside Australia.

No Tumours or New Growths were malignant.

Both Diabetics were male students, and both were born in Australia.

Appendicectomy was performed on 127 male and 51 female students. Analysis shows no variation of this surgical procedure in the sexes.

Tonsillectomy was performed on 342 males and 143 females. Analysis shows no variation in the sexes.

4.40. SMOKING BY STUDENTS OF THIS SAMPLE.

Introduction.

Comparison is made of the smoking habits of students with the environmental factors -

Faculty

Father's Occupation

Mother's occupation

Secondary school attended

Place of home of parents

Domicile of students during the University year.

Death, separation or divorce of parents

Area of Birth

Procedure.

Students answered question E.2. on the Student Health Service Form. This question included the number of cigarettes smoked each day.

Results.

4.41. Overall Situation.

Students who smoke.

254 males state that they smoke which represents 22.5% of the male students in this survey.

45 females state that they smoke which represents 12.1% of the female students in this survey.

Hence a total of 299 students admit to the habit of smoking (19.9% of students in this sample).

Discussion - Analysis suggests that more males smoke than females ($P < 0.001$).

4.42. Faculty of Student who smokes.

Faculty	Male smokers	(Faculty Total)	Female smokers	(Faculty Total)
Agricultural Science	7	(43)	-	(3)
Architecture	6	(21)	-	(8)
Arts	18	(59)	23	(125)
Dentistry	14	(67)	4	(13)
Economics	25	(67)	1	(6)
Engineering	39	(197)	-	(-)
Law	24	(92)	4	(21)
Medicine	19	(124)	1	(13)
Music	-	(-)	1	(8)
Pharmacy	13	(52)	-	(15)
Physiotherapy	1	(7)	2	(29)
Physical Education	3	(8)	-	(5)
Science	59	(282)	4	(86)
Social Studies	1	(2)	4	(29)
Technology	25	(107)	1	(6)
	254	(1,128)	45	(372)

Table 23.

Discussion.

Table 23 suggests that male students in the Faculty of Economics and female students in the Faculty of Arts show a significant increase in the incidence of smokers compared to the total sample, (Male Economics students - $0.01 > P > 0.001$, Female Art students - $0.05 > P > 0.02$).

4.43. Occupation of Fathers of Students who smoke.

Occupation of Father	Students who smoke	
	Males	Females
Professional	50	10
Semi-professional	25	6
Clerical	55	8
Own business	57	12
Skilled Tradesmen	48	6
Semi-skilled Tradesmen	7	3
Unskilled	8	-
Not known	4	-
	254	45

Table 24.

Discussion.

Comparison statistically of Tables 11 and 24 suggest that there is no significant correlation between the smoking habits of the male or female students of this survey and the occupation of their fathers.

4.43. Occupation of Mothers of Students who smoke.

Occupation of Mother	Students who smoke	
	Males	Females
Home, no tertiary education	153	23
Working, no tertiary education	48	12
Home, tertiary education	39	5
Working, tertiary education	14	5
Not known	-	-
	254	45

Table 25.

Discussion.

Statistical comparison of Table 13 and Table 25 suggests that student children of mothers who work and who have had no tertiary education show an increased incidence of smoking ($0.05 > P > 0.02$).

It might be expected that mothers who work and who have had a tertiary education would also have student children who adopt the habit of smoking. This has been shown not to be the case.

These findings might indicate that anti-smoking campaigns have a greater impact on those mothers with a higher education.

4.44. Type of secondary school attended by students who smoke.

The data show that 20.7% of male students from High Schools smoke, whereas 25.2% of male students from Colleges adopt this habit.

11.1% of female students from High Schools smoke which compares with 13.3% of female students from Colleges smoking.

Discussion.

Statistical analysis of the raw figures shows no variation in the smoking habits of students from High Schools and Secondary School Colleges.

4.45. Home of Parents of Students who smoke.

Area of Parents' Home	% of students who smoke	
	Male	Female
High Rate Area	25.4%	12.8%
Medium Rate Area	23.7%	12.9%
Low Rate Area	18.3%	14.0%
Country Town	20.6%	-
Country Rural	24.5%	10.3%
Interstate	29.0%	33.3%
Overseas	15.6%	-

Table 26.

Discussion.

Analysis of the raw figures suggest that the area of domicile of Parents has no relation to the smoking habits of students.

4.46. Domicile of Students who smoke.

Domicile of Students	% of students who smoke	
	Male	Female
Home	23.0%	13.5%
University College	22.4%	13.8%
Lodging	20.9%	4.1%
Flats	19.0%	-

Table 27.

Discussion.

Analysis of the raw figures suggests that the domicile of students has no influence on the incidence of smoking.

4.47. Death, Separation or Divorce of Parents, and the relation to the smoking habit of Students.

When the father has died, 15.0% of students smoke, but 42.8% of students smoke when the mother has died.

33.3% of students smoke where the father is divorced or separated and he has left home.

41.7% of students smoke where the divorced or separated mother has left home.

Discussion.

The death of a father appears to have no statistically significant effect on the smoking habits of students, but it could be suggested that the death of a mother of a student does increase the chances of that student smoking ($0.05 > P > 0.02$).

In a similar manner, separation or divorce of parents where the father lives away from home seems to have no significant effect on the smoking habits of students. Where the mother is divorced or separated, and where she is not living at home, the tendency of the student child adopting the habit of smoking appears to be significantly increased ($0.05 > P > 0.02$).

These statistical findings confirm the findings that 42.8% of students smoke when the mother has died, and 41.7% of students smoke when the mother is divorced or separated and is living away from home.

4.48. Area of Birth of Students who smoke.

19.4% of students born in Australia smoke which compares with 20.3% born in the United Kingdom, 29.0% born in Western Europe, 12.8% born in Southern Europe and 12.8% born in South East Asia.

Discussion.

Analysis of the raw figures suggests that male and female students born in Western Europe show a significant increase in the tendency to smoke (Males - $0.05 > P > 0.02$, Females - $0.05 > P > 0.02$).

4.49. Type of smoking.

18 males smoked a pipe. The remainder smoked cigarettes.

Cigarette Smokers.

Number of Cigarettes smoked per day.

Number per day	Males	Females	Total
1-4 per day	70 (29.7%)	24 (53.3%)	94
5-10 per day	58 (24.6%)	9 (20.0%)	67
10-14 per day	57 (24.2%)	10 (22.2%)	67
15-19 per day	23 (9.7%)	1 (2.2%)	24
20 and over per day	28 (11.9%)	1 (2.2%)	29
	236	45	281

Table 28.

Discussion.

The majority of female students who smoke, namely 53.9%, are found to smoke 1-4 cigarettes each day. Such a habit of smoking suggests a pattern of 'social smoking'. The majority (54.3%) of male students who smoke use 1-10 cigarettes each day.

If the students who smoke 11 or more cigarettes each day are considered, males show an incidence of 45.8% and females 26.6%.

It may be argued that 'Social smokers' of this age group are potentially 'heavy smokers'. It seems necessary to consider all students who smoke as potentially 'heavy smokers', and anti-smoking campaigns must be applied to all smokers at this age grouping.

Summary - The Smoking Habits of Students.

The data on smoking suggests that -

i. In this student sample, 22.5% of males and 12.1% of females are in the habit of smoking. This variation of smoking by male and female students is significant.

ii. Male students in the Faculty of Economics and Female Students in the Faculty of Arts show a greater tendency to smoke.

iii. The occupation of Fathers, the domicile of the students, the domicile of the parents, and the secondary school attended do not appear to influence the habit of smoking by students.

iv. Students whose mothers work and have no tertiary education show an increased tendency to smoke, which has also been noted where the mother has died, or is divorced or separated and is not living at home. Death, divorce or separation of the father, where he is not living home, does not affect the tendency of the student to adopt the smoking habit.

v. Students who were born in Western Europe show an increased tendency to smoke.

vi. 53.3% of the female students who smoke do so at the rate of 1-4 cigarettes each day. It has been suggested that this pattern of smoking could be classed as 'Social smoking'. 'Heavy smoking' (11 or more cigarettes each day) seems to be adopted by 45.8% of males and 26.6% of females who smoke.

4.50. ALCOHOL DRINKING BY STUDENTS.

Introduction.

The habit of drinking alcohol by these students is considered in the following manner -

The number and sex of students

The Faculties of students.

The occupations of Fathers of such students

The occupations of Mothers of such students

The domicile of these students

The type of Secondary School attended

The area of Birth of such students

It is intended that this assessment of the habit of taking alcohol in the first year will be used for later comparison of the habit of these students in the senior years of their courses.

Procedure.

Each student answered question E.3. of the 'Student Health Service Form'. No question was asked of the amount or type of alcoholic drink taken. If a student drank at a social occasion only, he was included in this grouping.

4.51. Number and Sex of students who drink alcohol.

Results.

Male students who drink alcohol - 528. (46.8% of all male students of this survey.)

Female students who drink alcohol - 125. (33.6% of all female students of this survey.)

Total students who drink alcohol - 653. (43.5% of all students in this sample.)

Discussion.

The data shows that more male students drink alcohol than female students ($0.01 > P > 0.001$).

4.52. Faculty of Student who takes alcohol.

Results.

Faculty	Males	Females	Total
Agricultural Science	20	-	20
Architecture	11	2	13
Arts	28	51	79
Dentistry	34	4	38
Economics	38	2	40
Engineering	83	-	83
Law	56	7	63
Medicine	57	9	66
Music	-	1	1
Pharmacy	24	4	28
Physiotherapy	1	5	6
Physical Education	4	1	5
Science	115	24	139
Social Studies	2	13	15
Technology	55	2	57
	528	125	653

Table 29.

Discussion.

Comparison of the data of Tables 6 and 29 suggests that male Law students show a higher incidence of the habit of drinking alcohol than would be expected ($0.05 > P > 0.02$).

4.53. Occupation of Fathers of students who drink alcohol.

Results.

Number and percentage of students in Father's occupational group.

Occupation of Father	Males	Females
Professional	124 (53.2%)	42 (40.8%)
Semi-professional	57 (44.2%)	17 (30.9%)
Clerical	107 (46.8%)	25 (44.6%)
Own business	110 (46.4%)	22 (25.0%)
Skilled tradesmen	95 (44.6%)	12 (25.5%)
Semi-skilled tradesmen	19 (43.2%)	3 (27.3%)
Unskilled worker	14 (41.2%)	2 (22.2%)
Not known	2	2
	528	125

Table 30.

Discussion.

There is no relation between the drinking of alcohol by students of this sample and the occupation of fathers.

4.53. Occupation of Mothers of Students who drink alcohol.

Results.

Number and percentage of students in Mother's occupational group.

Occupation of Mother	Males	Females
Home, no tertiary education	323 (44.1%)	68 (33.2%)
Working, no tertiary education	92 (54.8%)	22 (38.0%)
Home, tertiary education	71 (51.8%)	22 (34.4%)
Working, tertiary education	42 (46.1%)	13 (29.5%)
	528	125

Table 31.

Discussion.

Statistical analysis of tables 13 and 33 suggests that the occupation of the mother has no significant effect on the habit of drinking alcohol by students.

4.54. Domicile of Student in the habit of taking alcohol.

Results.

Comparison of the findings of such students with Appendix 10 shows that -

Domicile of students drinking alcohol

Domicile	Males		Females	
	Number	% of males taking alcohol in domicile group.	Number	% of females taking alcohol in domicile group.
Home	389	45.6%	104	36.1%
University College	80	68.0%	10	34.5%
Lodging	49	42.6%	9	18.4%
Flats	10	23.8%	2	33.3%
	528		125	

Table 32.

Discussion.

Statistical analysis of Table 23 and Appendix 10 suggests two variations which are -

Male students, living in University Colleges, show a greater tendency to take alcohol ($P<0.001$).

Male students, living in Flats, show lesser tendency to take alcohol ($0.05>P>0.02$).

These variations are not apparent in female students.

4.55. Secondary School attended by students who drink alcohol.

Results.

57.6% of males and 35.8% of females from secondary independent Schools drink alcohol, whereas 39.6% of males and 31.7% of females from State High Schools have this habit. Analysis suggests that male students from these independent secondary Schools show an increased tendency to drink alcohol ($0.01 > P > 0.001$).

4.56. Areas of Birth of Students who take alcohol. Results.

Area of Birth	Males		Females	
	Number	%	Number	%
Australia	384	48.2%	90	32.7%
United Kingdom	50	55.6%	10	33.3%
Western Europe	47	49.5%	18	48.7%
Southern Europe	19	47.5%	3	42.9%
Eastern Europe	5	50.0%	2	66.7%
South East Asia	9	18.9%	-	-
New Zealand	-	-	1	
Other Areas	14		1	

Table 23.

Analysis of the data of Tables 9 and 33 shows an even distribution of the areas of birth and the habit of drinking alcohol of students in this survey with the one exception that male students from South East Asia show a reduced tendency to adopt this habit ($P < 0.001$).

Summary - Students who drink alcohol.

Investigation of the habit of drinking alcohol of this student sample suggests that -

i. A significantly greater number of male students (46.8%) than female students (33.6%) drink alcohol.

ii. Male Law students demonstrate an increased tendency to drink alcohol.

iii. More male University College students drink alcohol.

iv. Male students who had attended secondary School Colleges show an increased tendency to drink alcohol.

v. Male students, living in Flats, show less tendency to drink alcohol. This pattern is also evident in male students from South East Asia.

vi. The occupations of Fathers and Mothers appears to have no relation to the alcohol drinking habits of students.

4.60. SPORT AND EXERCISE.

Introduction.

An enquiry has been made concerning the sport and exercise taken by students, and the time spent at such exercise.

Throughout this section, exercise includes all forms of sport and exercise.

It is realised that various types of exercise require different amounts of work. In this context, the motivation of students to gain some degree of physical fitness by exercise is the important aspect, rather than the work performed per time unit. With this in mind, the types of exercise are not considered.

Procedure.

The student indicated the type of sport played in Part E.4. of the Student Health Service Form. More details of the exercise taken were obtained by completing the 'Performance Sheet'. The time taken on exercise each week were divided into the five periods of the University year, namely - 'First Term - T 1', 'Second Term - T 2', 'Third Term - T 3', 'Pre-examination vacation and the examinations - E', and 'Long Vacation - H'. These periods of the University year are indicated by the abbreviations.

4.61. Students taking neither sport nor exercise.

Results.

The findings of this investigation are recorded in Appendix 11.

183 males and 70 female students take no form of exercise during the University year, excluding the 'long University Vacation'.

Many students take exercise during one, two or three periods, but they do not take exercise at all times. Table 34 shows the numbers of students not taking exercise during the periods of the year.

Sex	Number in Sample	Students taking no exercise				
		T1	T2	T3	E	H
Male	1,128	243	280	348	541	103
Female	372	84	119	126	181	26

Table 34.

The data from Table 34 shows that in the first term, 21.5% of male students and 22.6% of female students take no exercise. The percentage rises as the year progresses until the 'long vacation' when the percentage drops suddenly. The pattern is shown in Fig. 4.

STUDENTS NOT TAKING EXERCISE

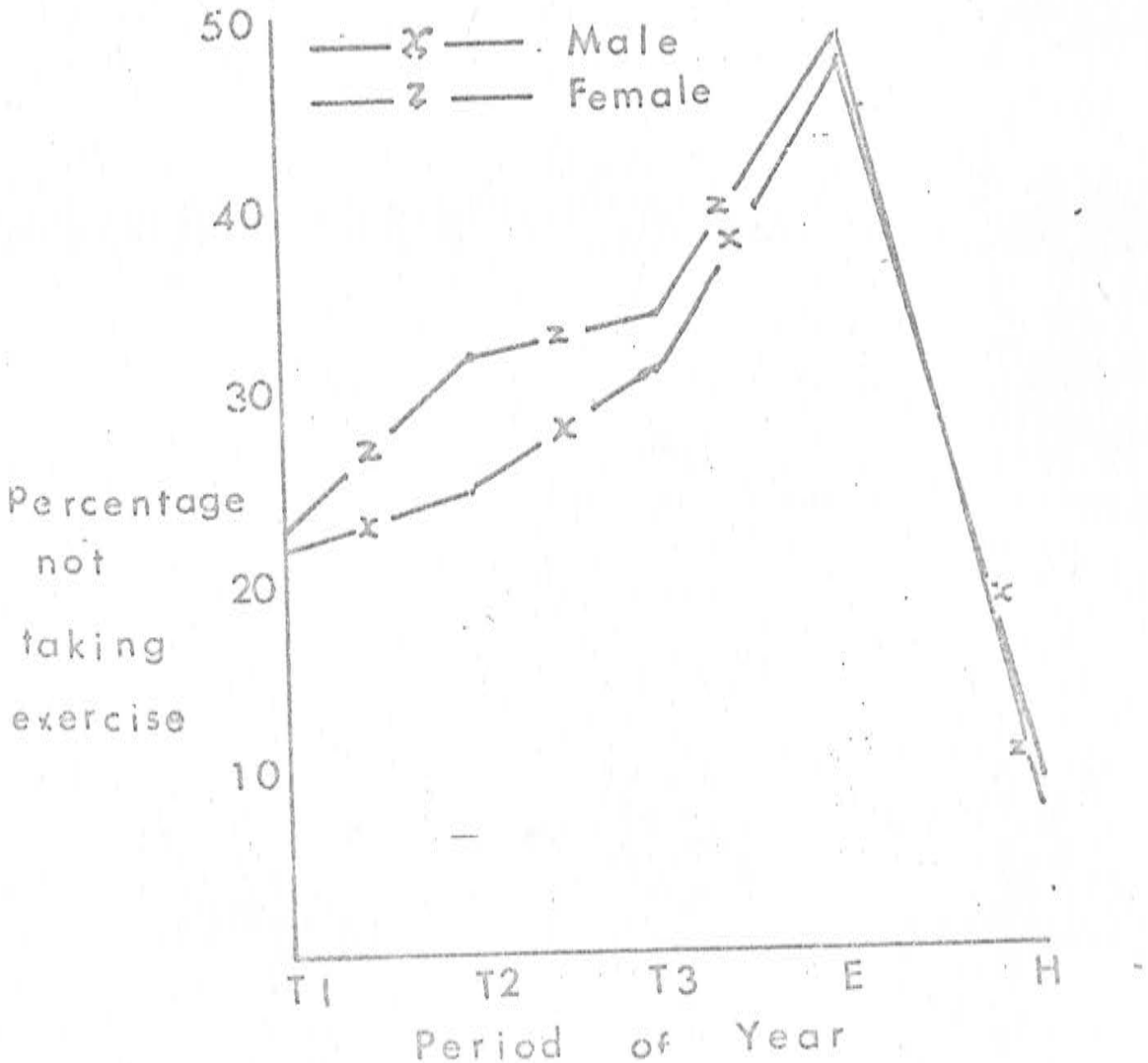


FIG 4

4.61 (cont)

Discussion.

Analysis indicates that the pattern of male and female students taking no exercise is the same in the corresponding periods of the University year with the exception that female students show an increased number in the second term ($0.01 > P > 0.001$).

4.62. Students taking exercise.

Results.

The data was obtained from the findings in Appendix 11.

Average Hours of sport and exercise per week.

Sex	Periods of University Year				
	T1	T2	T3	E	H
Males	4.1	3.8	3.2	2.9	5.7
Females	3.4	3.0	2.9	2.6	5.4

Table 35.

The pattern of mean hours playing sport is illustrated in Fig. 5.

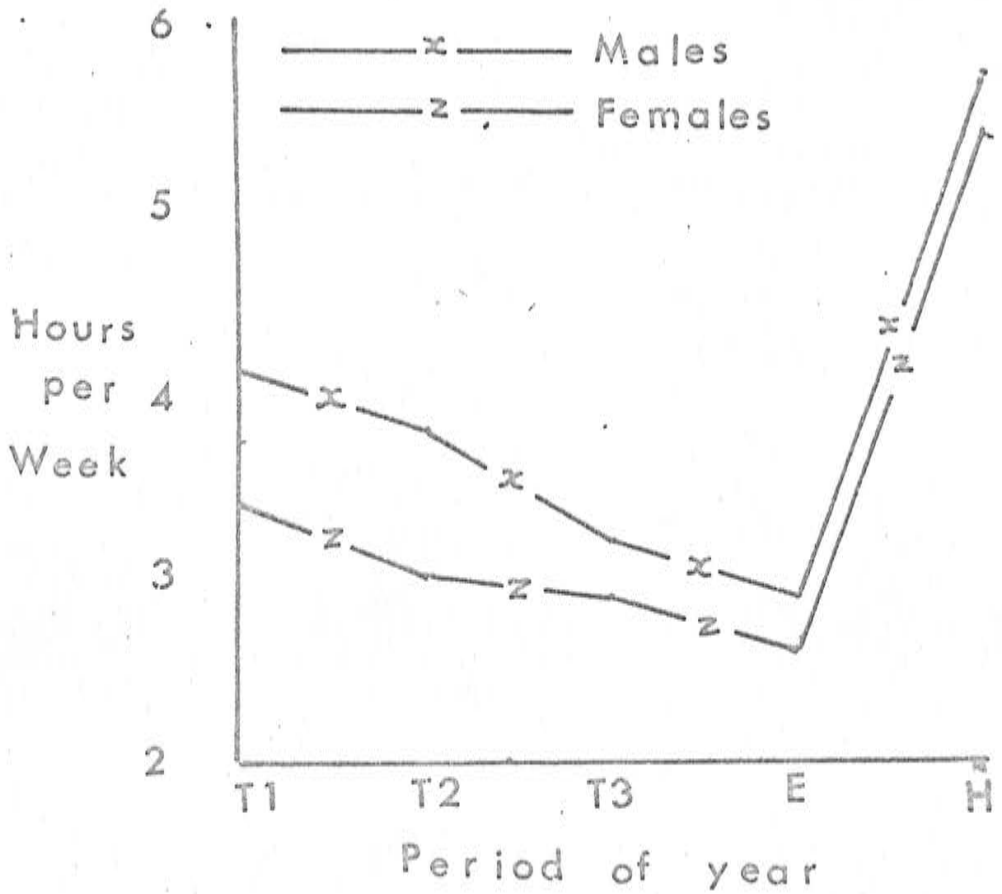


FIG 5

4.62 (cont)

Discussion.

Table 35 and Fig. 5 show that the mean hours of exercise taken diminishes as the University year proceeds. The shortest time at exercise is spent during the pre-examination and examination periods when males average 2.9 hours per week and females 2.6 hours per week.

Throughout the year, it appears that male students indulge in exercise for longer periods than female students.

When the Faculties of students taking exercise are considered, the findings are shown in Tables 36A and 36B. This information is obtained from the data in Appendix 11.

Male Students who take exercise, considered in Faculties.

Variations from the mean (+ above mean, m - mean, - below mean.

Faculties	Terms					+	m	-
	T1	T2	T3	E	H			
Agricultural Science	+	+	+	+	m	4	1	-
Architecture	-	+	-	m	+	2	1	2
Arts	-	-	-	m	-	-	1	4
Dentistry	-	m	-	-	-	-	1	4
Economics	+	m	+	+	+	4	1	-
Engineering	m	m	-	-	-	-	2	3
Law	+	+	+	+	+	5	-	..
Medicine	-	m	+	+	-	2	1	2
Pharmacy	+	+	+	+	+	5	-	-
Physiotherapy	m	-	-	+	+	2	1	2
Physical Education	+	+	+	+	+	5	-	-
Science	-	-	-	-	-	-	-	5
Social Studies	+	+	-	+	+	4	-	1
Technology	m	-	m	-	m	-	3	2

Table 36A.

4.62 (cont)

Female Students who take exercise, considered in Faculties.

Variations from the mean (+ above mean, m-mean, - below).

Faculties	Terms							
	T1	T2	T3	E	H	+	m	-
Agricultural Science	+	+	-	-	-	2	-	3
Architecture	-	+	+	+	+	4	-	1
Arts	-	-	+	-	-	1	-	4
Dentistry	+	+	-	+	-	3	-	2
Economics	+	+	+	-	-	3	-	2
Law	+	-	-	-	+	2	-	3
Medicine	-	-	-	-	-	-	-	5
Music	-	-	-	-	-	-	-	5
Pharmacy	m	+	+	+	+	4	1	-
Physiotherapy	-	+	+	+	+	4	-	1
Physical education	+	+	+	+	+	5	-	-
Science	-	-	-	-	-	-	-	5
Social Studies	+	-	+	m	+	3	1	1
Technology	-	+	+	-	-	2	-	3

Table 36B.

The variations from the mean are demonstrated diagramatically in Fig. 6.

The data in Tables 36A and 36B suggest that Faculties in which male students take exercise for the longer periods than the mean in four or five periods during the University year are -

Physical Education

Pharmacy

Law

Agricultural Science

Economics

Social Studies.

TENDENCY OF STUDENTS IN FACULTIES TO TAKE EXERCISE

Variations from the Mean of exercise taken,

5 periods of the University Year.

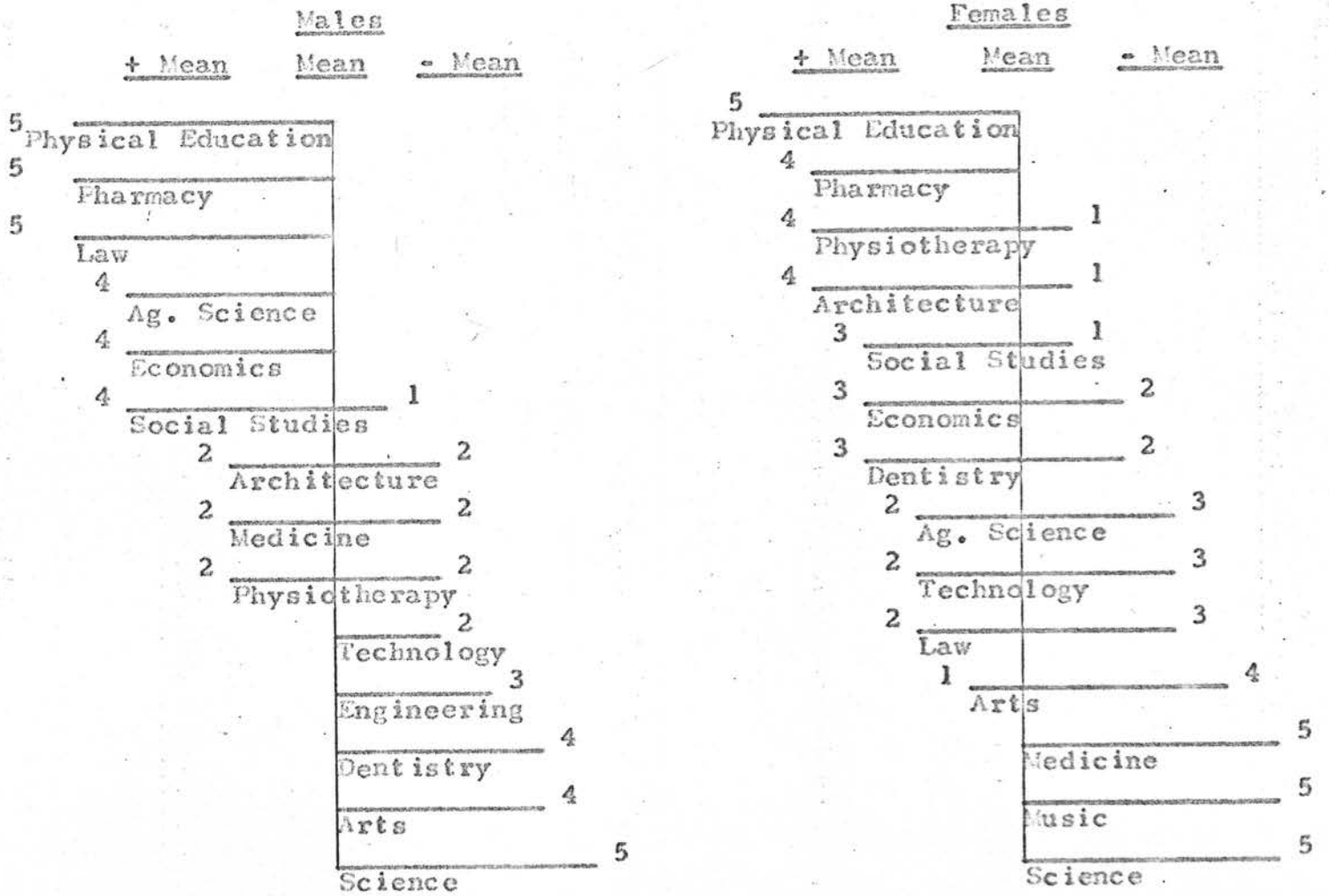


Fig. 6.

4.62 (cont)

Female students from the following Faculties show this same tendency -

Physical Education

Pharmacy

Physiotherapy

Architecture

The opposite situation applies to male students in the Faculties of -

Arts

Dentistry

Science,

and to Female students in the Faculties of

Arts

Medicine

Music

Science.

It could be concluded that students in the more Academic courses (Arts, Science and Music) take less exercise.

Summary - Exercise Habits of Students.

a. Students, both male and female, show a pattern where the number of students not taking exercise increases as the University year proceeds. In the first term, 21.5% of males and 22.6% of females take no exercise, and the percentage increases until the pre-examination and examination period when it has been found that 48.0% of males and 48.7% of females take no exercise.

b. When students taking exercise are considered, the mean hours of time spent at exercise decreases as the year proceeds. In the first term, males average 4.1 hours each week and females average 3.4 hours each week, but in the pre-examination and examination period this average is reduced to males - 2.9 hours each week and to females - 2.6 hours each week.

c. When the students playing sport are considered, it is found that male and female Arts and Science students play less sport during 4 or 5 of the periods of the University year. This suggests that students in the more Academic courses (Arts and Science) have a tendency to take less exercise.

4.70. HABITS OF RELAXATION OF STUDENTS.

Introduction.

Two periods of relaxation are considered -

4.71 Relaxation at week-ends

4.72 Relaxation at Study breaks.

Procedure.

These findings were obtained by questioning the student when the 'Performance Sheet' was completed.

4.71. Relaxation at Week-ends.

Results.

The data found is shown in Appendix 12.

13 male and 4 female students admit to no relaxation at week-ends.

Types of Relaxation.

Table 37 shows the percentage of male and female students who preferred various types of relaxation.

Type of Relaxation

Relaxation	% of males	% of females
Art, drama	3.5%	23.1%
Music, singing	22.7%	34.4%
Photography	2.3%	1.1%
Chess	4.2%	0.3%
Reading	38.8%	54.6%
Radio	8.1%	2.7%
Television	61.4%	48.7%
Church	10.1%	13.2%
Youth Work	18.3%	22.6%
Fishing	0.1%	-
Films and Dancing	34.5%	33.6%

Table 37.

Discussion.

Few students admit to having no relaxation at week-ends.

Comparison of the types of relaxation of the sexes by analysis of Appendix 12 suggests that -

More Female Students participate in 'Arts and Drama', 'Music and Singing' and 'Reading', (Arts and Drama -

4.71 (cont)

$P < 0.001$, Music and Singing - $P < 0.001$, and Reading - $P < 0.001$), while more males relax by using 'Chess,' 'Radio' and 'Television' (Chess - $0.01 > P > 0.001$, Radio - $0.01 > P > 0.001$ and Television - $0.02 > P > 0.01$).

The other types of relaxation show the same popularity with male and female students.

4.72. Relaxation at Study Breaks.

Results.

The types of relaxation used by students at study breaks is shown in Table 38.

Type of Relaxation at Study Breaks

Relaxation	% of students using the type of break
No break	29%
Running	1%
Walking	7%
Other exercise	2%
Music	6%
Reading	3%
Television	12%
Eating	40%

Table 38.

Discussion.

Two unexpected findings come from the data of Table 38. When those students who taken no break are considered, 29% seems a higher percentage than might be expected.

It is surprising to observe that 40% of students eat at study breaks.

Analysis of the findings show that 12% of students relax by watching Television at study breaks, with the male/female incidence being 14% and 7% respectively.

4.80. STUDY HABITS, PERIODS OF STUDY AT NIGHT.

Introduction.

This information was obtained so that in a future study the findings can be related to the examination performance of students.

Procedure.

The time of study at night was recorded on the 'Performance Sheet'. Each student was asked the time at which he or she commenced study after the evening meal and the time at which study for the night finished.

It would be likely that students examined early in the year would give a different account of study periods to those students examined in the third term. The data give a general picture of evening study habits of students in this sample.

Results. Hours of Study at Night by Faculties.

Faculty	Mean Hours Study at Night	
	Males	Females
Agricultural Science	3.7	3.7
Architecture	4.1	4.1
Arts	3.9	3.6
Dentistry	4.0	3.9
Economics	3.7	3.6
Engineering	3.9 Mean	Mean
Law	3.9 Male	3.8 Female
Medicine	4.2 Hours -	4.1 Hours -
Music	3.9	3.3 3.6
Pharmacy	3.9	3.5
Physiotherapy	4.1	3.7
Physical Education	3.4	2.8
Science	3.7	3.7
Social Studies	5.0	3.2
Technology	3.9	3.5

Table 39.

4.80 (cont)

Discussion.

Analysis of the data suggests that male students study for longer periods at night ($0.05 > P > 0.02$).

The average times of study at night taken by these students are Males - 3.9 hours, and Females - 3.6 hours.

Table 39 shows that male and female students in the courses of Architecture and Medicine study for 4 or more hours each night.

Summary of Chapter 4.

4.10. Domicile of Parents: the permanent home of students.

41.8% of students of this sample come from homes in the 'Medium Rate' section of the Metropolitan Area of Adelaide.

It has been found that female students are more likely to come from the wealthier economic groups, namely the students with homes in the High Rate section and the Rural Country.

It would also appear that parents living in Country Towns and Overseas give sons a preference in the opportunity to attend the University.

4.20. Domicile of Students during the University Year.

Students from the Metropolitan Area prefer to live at home during the University year. This preference is most marked in students from the 'Low Rate' and 'Medium Rate' sections of the Metropolitan Area, while students from the 'High Rate' section of the Metropolitan Area show a higher percentage living in University Colleges.

More male students live in University Colleges than female students.

Country students, from the Town and Rural Areas, show a preference for 'Lodgings', whereas 'interstate' students tend to prefer University Colleges.

Summary of Chapter 4 (cont)

Overseas male students appear to show a preference for Flats, while overseas female students prefer 'Lodgings'

4.30. Previous illnesses and injuries.

The previous illnesses, injuries and operations of these students are tabulated and discussed.

4.40. Smoking.

22.5% of male and 12.1% of female students of this sample are in the habit of smoking. The difference between male and female students is significant.

Male students in the Faculty of Economics and Female students in the Faculty of Arts show a greater likelihood of adopting the habit of smoking.

The occupation of Fathers, the domicile of the students, the domicile of the parent (the permanent home of the student) and the secondary school attended do not appear to influence the habit of smoking by students.

Students whose mothers work and have no tertiary education show an increased incidence of smoking. This tendency is also noted where the mother has died, or is divorced or separated and she is not living at home. Death, divorce or separation of the father, where he is not living home, does not affect the tendency of the student to adopt the smoking habit.

Summary of Chapter 4 (cont)

Students who were born in Western Europe show an increased tendency to smoke.

55.3% of these female students who smoke do so at the rate of 1-4 cigarettes each day. It has been suggested that this pattern of smoking could be classed as 'Social Smoking'. 'Heavy smoking' (11 or more cigarettes each day) seems to be adopted by 45.8% of males and 26.6% of females who smoke.

4.50. Alcohol - 'Students who drink alcohol'.

A significantly greater number of male students (46.8%) than female students (33.6%) drink alcohol.

Male Law students demonstrate an increased tendency to drink alcohol.

More male University College students drink alcohol than other male students in the survey, and this pattern of behaviour is more likely in students who received their secondary education in a 'College'.

Less male students, living in Flats, drink alcohol than might be expected from the statistical analysis, and this finding appears to be associated with the tendency of male Asian students not to drink alcohol.

The occupations of fathers and mothers has no relation to the alcohol drinking of students.

Summary of Chapter 4 (cont)

4.60. Exercise taken by students.

Students, both male and female, show a pattern where fewer students take exercise as the University year proceeds. In the first term, 21.5% of males and 22.6% of females take no exercise, and this percentage increases until the pre-examination and examination period when 48.0% of males and 48.7% of females take no exercise.

When the students who take exercise are considered, the mean hours of time spent at exercise decreases as the year progresses. In the first term, males average 4.1 hours each week, and females average 3.4 hours each week, but in the pre-examination and examination period this average is reduced to males - 2.9 hours each week, and to females - 2.6 hours each week.

The findings suggest that students in the more Academic courses (Arts and Science) have a tendency to take less exercise.

4.70. Relaxation.

More female than male students participate in Arts and Drama, Music and Singing, and Reading, while the opposite situation applies with Chess, Radio and Television.

The commonest type of relaxation at Study Breaks appears to be eating.

Summary of Chapter 4 (cont)

4.80. Study Periods.

Male students study for longer periods at night.

It has been noted that male and female students in Architecture and Medicine study four or more hours as a mean each study night.

CHAPTER 5.

PHYSICAL HEALTH OF STUDENTS.

5.000. Introduction.

Systems -5.010. General

5.011. Height.

5.012. Weight.

5.020. Eyes and Vision.

5.030. Ears and Hearing.

5.040. Nose and Throat.

5.050. Respiratory.

5.060. Circulatory.

5.061. Blood pressure.

5.062. Pulse Rate.

5.063. Cardiac Murmurs.

5.064. Haemoglobin Estimation - Female Students.

5.065. Other Vascular abnormalities.

5.070. Gastro-intestinal.

5.080. Genito-urinary.

5.081. Male.

5.082. Female.

5.090. Nervous System.

5.100. Skeletal.

5.110. Skin.

5.000. INTRODUCTION.

This Chapter describes the state of Health found at the Physical medical examination of the 1,500 students in this sample.

Procedure.

The findings were recorded on the 'Student Health Service Form' at the time of the medical examination.

The following systems are discussed -

5.010. General - The height and weight of students.

5.020. Eyes - Visual acuity, colour blindness and eye disease.

5.030. Ears - Hearing and ear disease.

5.040. Nose and Throat.

5.050. Respiratory System.

5.060. Circulatory system - Blood pressure, pulse rate, cardiac murmurs, haemoglobin estimations of female students, and other vascular abnormalities.

5.070. Gastro-intestinal - Teeth, abdomen and hernia.

5.080. Genito-urinary - Urine testing, kidney and genital conditions of male and female students, the latter including consideration of dysmenorrhoea.

5.090. Nervous System.

5.100. Skeletal System.

5.110. Skin.

5.010. GENERAL - HEIGHTS AND WEIGHTS.

Introduction and Procedure.

Students were grouped in the following areas of birth -

Students from South East Asia,

Students from 'other areas',

Students with permanent residence Australia, including those born in Australia, United Kingdom, New Zealand, Western, Southern and Eastern Europe.

The measurements of height and weight were conducted by the Clerk of the Health Service, under the conditions required for Life Assurance Medical Examinations.

5.011. Heights.

Results.

The data from this part of the medical examination is recorded in Appendix 13A. and summarised in Table 40A. for males and Table 40B. for females.

Males - Area of Birth	Mean Height
a. South East Asia.	66.7"
b. 'Other Areas'	68.1"
c. Permanent Residence	69.7"
Born in Australia	69.8"
United Kingdom	69.3"
Western Europe	69.9"
Southern Europe	67.6"
Eastern Europe	70.3"
Insufficient sample for testing from New Zealand.	

Table 40A.

Females - Area of Birth	Mean Height
a. South East Asia.	63.3"
b. 'Other Areas' - insufficient sample	
c. Permanent Residence	64.9"
Born in Australia	65.0"
United Kingdom	64.6"
Western Europe	64.9"
Southern Europe	63.3"
Eastern Europe - insufficient sample	
New Zealand - insufficient sample.	

Table 40B.

5.011 (cont)

Discussion.

The mean heights are given in Tables 40A. and 40B.

Analysis shows no significant variation in the heights of male and female students from the various areas of Birth. The greatest deviation from the mean of the European Races is seen in male students who were born in Southern Europe, but this variation is not statistically significant ($0.20 > P > 0.10$).

Analysis of Appendix 13A. shows that there is no difference between students' heights in the examinations in 1965 and 1966.

a. Students born in South East Asia. Kadri (35) in 1961 surveyed the height of students at the University of Singapore. This survey included students of the Chinese, Malay and Indian Races. The variations from the survey are shown in Table 41.

	Kadri Survey	This Study	Difference
Males	66.1"	66.7"	0.6"
Females	61.9"	63.3"	1.4"

Table 41.

Berry (34) has recorded his findings of the height of Male Indian Students at the Medical and Science Colleges, Nagpur, in 1957-58. Table 42 shows

.011 (cont)

Berry's findings and the heights of male Students from South East Asia in this Study.

Height Percentiles	Berry	This Survey
P3	61.14"	62.75"
P10	61.71"	63.50"
P25	64.04"	65.00"
P50	65.66"	66.67"
P75	67.27"	68.20"
P90	69.60"	69.75"
P97	70.17"	71.25"

Table 42.

Table 42 shows a general increase of 1" in the heights of male students from South East Asia in this Study compared with the Berry survey.

b. Students from Other Areas. These students are a heterogeneous group, and therefore no comparison can be made.

c. Students permanently resident in Australia. A comparison of the heights of students in this Study is made with findings of 'Memorandum 20, 1949. Great Britain Medical Research Council' (36), Clements and Pickett (37), Grant and Hutchins (38), Johnston, Cheeseman and Merritt (28) and Johnston and Merritt (29). The findings are summarised in Table 43.

5.011 (cont)

Study Source	Mean Male Height	Variation from the mean of this Study	Mean Female Height	Variation from the mean of this Study
This Study - permanent residence in Australia	69.7"		64.9"	
1918. Ministry of National Service (36)				
Liverpool	65.3"	- 4.4"		
North Western	64.8"	- 4.9"		
West Midlands	65.5"	- 4.2"		
Oxford Undergraduates	69.5"	- 0.2"		
Cambridge Undergruaduates	68.9"	- 0.8"		
Clements and Pickett (37) - Scotsmen	67.0"	- 2.7"		
Grant and Hutchins (38)				
- Cambridge Freshmen (1948-50)	69.9"	+ 0.2"		
- University of Wales Freshmen (1948-50)	68.5"	- 1.2"		
Johnston, Cheesman, and Merritt (1949-54) (28) - Northern Ireland	67.8"	- 1.9"	62.9"	- 2.0"
Johnston, Merritt (29) 1962 - Northern Ireland	68.0"	- 1.7"	63.1"	- 1.9"
This Study				
Australian Born	69.8"	+ 0.1"	65.0"	+ 0.1"
United Kingdom	69.3"	- 0.4"	64.6"	- 0.3"
Western Europe	69.9"	+ 0.2"	64.9"	-
Southern Europe	67.7"	- 2.0"	63.3"	- 1.6"
Eastern Europe	70.3"	+ 0.6"	63.2"	- 1.7"

Table 43.

Two interesting comparisons may be made from Table 43. The first comparison concerns the height of Cambridge undergraduate Students and the height of students, born in the United Kingdom, who have migrated to

5.011 (cont)

Australia, and the relation of these heights to Wars and the Economic Depression of 1929 and the early 1930's. These comparisons are made diagramatically in Fig. 7.

MEAN HEIGHT
CAMBRIDGE UNDERGRADUATES,
STUDENTS OF THIS SAMPLE BORN
IN UNITED KINGDOM.

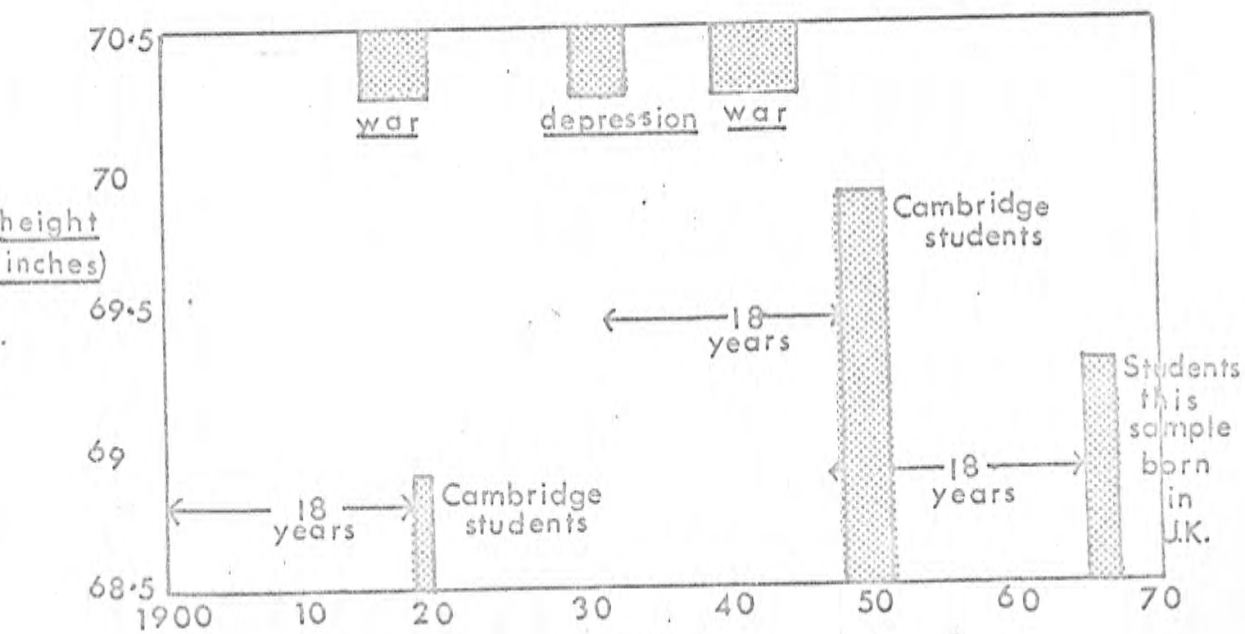


FIG 7

5.011 (cont)

The Cambridge undergraduates of 1918 lived under war conditions from the age of 14 to 18, and their mean height was 68.9". The Cambridge undergraduates of 1948-50 had experienced the Economic depression and the Second World War. During the depression they were aged 0 to 3 years, and during the second World War they were 9 to 15 years of age. However, in 1948-50 these students showed a mean height of 69.9" with an increase of 1" above the findings of the mean height of such students in 1918.

Those students who were born in the United Kingdom after the 1939-45 War and who migrated to Australia show a mean height of 69.3" which is 0.6" below the mean height of Cambridge Undergraduates of 1948-50. The majority of these students had migrated to Australia at an early age, and they should have received the benefit of good and plentiful food in Australia.

These findings seem to be contrary to that expected by economic and general living standards. The supposition might be made that the diet of the Cambridge undergraduates, during their years of maximum growth, 9 to 15 years, and during the strictly controlled diet of the Second World War, had a beneficial effect on such students' heights.

A second comparison of the heights of male students from the United Kingdom and of Australian born students is shown in Fig. 8.

MEAN HEIGHTS

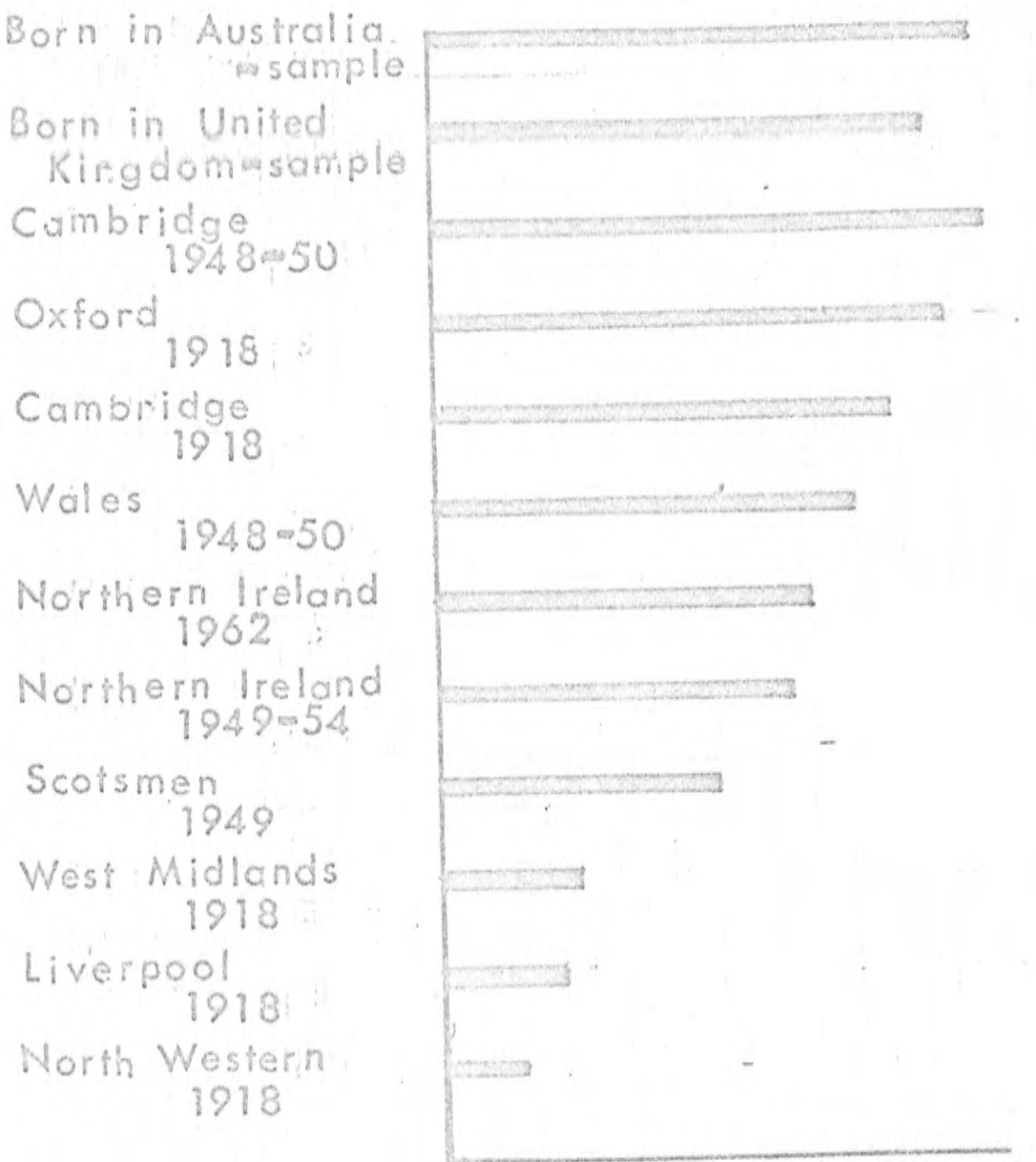


FIG 8

Only Cambridge Students in 1948-50 are taller than Australian born students, while these students and the Oxford students of 1918 are taller than the students who migrated to Australia from the United Kingdom.

5.012. Weights.

Results.

This data is recorded in Appendix 13B.

Table 44A. and Table 44B. summarise the findings of male and female students respectively.

Males - Area of Birth	Mean Weight
a. South East Asia	133 lbs.
b. 'Other Areas'	140 lbs.
c. Permanent Residence	152 lbs.
Born in Australia	152 lbs.
United Kingdom	146 lbs.
Western Europe	153 lbs.
Southern Europe	148 lbs.
Eastern Europe	156 lbs.
Insufficient sample for testing from New Zealand.	

Table 44A.

Females - Area of Birth	Mean Weight
a. South East Asia	111 lbs.
b. 'Other Areas'	insufficient sample
c. Permanent Residence	127 lbs.
Born in Australia	127 lbs.
United Kingdom	126 lbs.
Western Europe	129 lbs.
Southern Europe	132 lbs.
Eastern Europe	insufficient sample
New Zealand	insufficient sample

Table 44B.

5.012 (cont)

Discussion.

a. Students from South East Asia. Kadri (35) in 1961 surveyed the weight of students at the University of Singapore, which included students of the Chinese, Malay and Indian Races. The variations from these South East Asian students and those of this Study are shown in Table 45.

	Kadri Survey	This Study	Difference
Males	122.4 lbs.	133 lbs.	10.6 lbs.
Females	103.1 lbs.	111 lbs.	7.9 lbs.

Table 45.

Table 45 shows that Students from South East Asia in this sample at the University of Adelaide are heavier than students at the University of Singapore. By comparison with the survey of Berry (34), the mean weight of students from South East Asia in this sample is 18 lbs heavier than Indian College students at Percentile 50. Weight at P 50 of this survey is 130 lbs, whereas weight at P 50 of Berry's survey was 111.8 lbs.

b. Students from 'Other areas'. These weights have not been considered because such students are of a heterogeneous group.

5.012. (cont)

c. Students with permanent residence in Australia. The findings of weights of several surveys are compared with the weights of students in this Study in Table 46.

Study Source	Male mean weight	Variation from mean of this study.	Female mean weight	Variation from mean of this study.
This Study - permanent residence	152 lbs.		127 lbs.	
1918 Ministry of National Service (36)				
- Liverpool	119 lbs.	- 33 lbs.		
- North Western	115 lbs.	- 37 lbs.		
- West Midlands	119 lbs.	- 33 lbs.		
- Oxford University	152 lbs.	same		
- Cambridge Univ.	153 lbs.	+ 1 lb.		
Grant and Hutchins (38)				
- Cambridge (1948-50)	153 lbs.	+ 1 lb.		
- University of Wales (1948-50)	145 lbs.	- 7 lbs.		
Johnston, Cheeseman and Merritt (28)	149 lbs.	- 3 lbs.	129 lbs.	+ 2 lbs.
Johnston and Merritt (29)	150 lbs.	- 2 lbs.	130 lbs.	+ 3 lbs.
This Survey -				
Australia	152 lbs.	same	127 lbs.	same
United Kingdom	146 lbs.	- 6 lbs.	126 lbs.	- 1 lb.
Western Europe	153 lbs.	+ 1 lb.	129 lbs.	+ 2 lbs.
Southern Europe	148 lbs.	- 4 lbs.	132 lbs.	+ 5 lbs.
Eastern Europe	156 lbs.	+ 4 lbs.	insufficient sample	

Table 46.

Discussion.

Table 46 shows that the weights of male students have only a small variation, apart from males examined for national

5.012 (cont)

service in the United Kingdom in 1918, but this variation does not apply to students from Oxford and Cambridge Universities examined at that time. The weight of Cambridge students in 1918 and 1948-50 is shown to be the same.

There is little difference in the weight of female students in this survey who have a permanent residence in Australia and in the surveys of Johnston et Alia at Queen's University of Belfast.

Summary - Heights and Weights of Students.

a. Students from South East Asia.

Male students from this area show a mean height of 67.7" and a mean weight of 133 lbs. Female students from this area show a mean height of 63.3" and a mean weight of 111 lbs.

Comparison has been made with the heights and weights of these students with similar surveys by Kadri at the University of Singapore and Serry at the Medical and Science Colleges at Nagpur, India. An increase in height and weight is shown in the students from South East Asia in this survey when compared to the height and weight of students at the University of Singapore. As many of the Asian students in this survey have spent 2 or 3 years attending Secondary school in Australia, further investigation of this difference

5.010 (Summary) (cont)

appears to be warranted.

c. Students with permanent residence in Australia.

These male students show a mean height of 69.7" and a mean weight of 152 lbs. Such female students show a mean height of 64.9" and a mean weight of 127 lbs.

Comparison of mean heights and mean weights of males and females have been made with the birthplace, and no significant variation has been found.

The effect of war and depression has been examined in the heights of Cambridge Undergraduate students and students who were born in Australia and who migrated to Australia. Better nutrition during the Second World War in the United Kingdom seems to be responsible for the growth in height of Cambridge undergraduate students.

5.020. EYES AND VISION.

Introduction.

Eyes and vision are considered in the following manner -

a. Colour vision

b. Minor refractive errors.

c. Major refractive errors - The myopias

- The amblyopias, and squints.

d. Eye diseases.

Procedure.

Each student was tested on Snellin's Type for visual acuity, and on the Ischihara Chart for Colour blindness.

At the medical examination, the conjunctivae, cornea, fundi, eye tension and fields of vision were observed.

It has been observed that students are inclined to report during the third term and pre-examination period with symptoms of tiredness, eye-strain and headaches when the visual acuity is 6/6-3 or less. On this basis, the classification of corrected or uncorrected refractive error has been made.

Results.

5.021. Colour Vision.

The students with abnormal colour vision are shown in Table 47.

Type of Colour Blindness	Males	Females	Total
Red-green	59	2	61
Green	9	1	10
Red	7	-	7
	75	3	78

Table 47.

5.020 (cont)

5.022. Minor Refractive Error.

Visual acuity of 6/6-3 to 6/9 in one or both eyes.

Sex	Uncorrected Error	Corrected Error
Males	133 (11.8% of males)	38 (3.4% of males)
Females	37 (10.0% of females)	23 (6.2% of females)
All students	170 (11.3% of students)	61 (4.1% of students)

Table 48.

5.023. Myopia.

Sex	Uncorrected or insufficiently corrected.	Corrected Error
Males	85 (7.5% of males)	183 (16.2% of males)
Females	31 (8.3% of females)	62 (16.7% of females)
All students	116 (7.7% of students)	245 (16.3% of students)

Table 49.

5.024. Amblyopia and Squint.

26 males and 8 females had amblyopia (2.3% of all students).

5 uncorrected squints were noted.

5.024. Other eye conditions.

2 male students had congenital conical corneas, while another male student suffered from a congenital loss of the peripheral vision. 11 students had received accidental injury to the eye and this group included one student with the loss of an eye, two students with loss of vision from

5.020 (cont)
hyphaema, 6 students had a lens opacity from injury, and two had severe lid scarring.

One female student was noticed with corneal scarring from trachoma.

6 pterygia were observed, and infections numbered with blepharitis and 7 with chronic conjunctivitis.

Previous operative procedures performed were -

Squint - Males 12, Females - 7.

Pterygia - Male - 1.

Eye injury - Males - 8, Females - 2.

Catheterization of the tear duct - Female - 1.

Discussion.

5.021. Colour Vision.

Data from Table 47 shows that 6.6% of male students and 0.8% of female students were colour blind. All female students stated that some male relations of both the mother and father were so affected.

The birthplace of colour blind males indicates that those of Australian birth have a percentage of 6.4%, United Kingdom 6.4%, Western Europe 7.6%, Southern Europe 5.7% and South East Asia 9.9%. Analysis suggests no statistical variation in the incidence of colour blindness and birthplace.

Johnston et Alia (28) found in the 1949-54 survey at Belfast that 6.9% of male students were colour blind.

5.020 (cont)

Kadri (35) at the University of Singapore recorded that 2.9% of male students had this abnormality, and Bard (39) at the University of Hong Kong found that 4.3% of males were colour blind. These findings show a variation from this survey where 9.9% of male students from South East Asia were colour blind.

Difficulties from colour blindness may be experienced by students in the courses of Architecture, Engineering, Science, Medicine and Dentistry. Some students are unable to appreciate stains used in microscopy, and in titrations. Architectural students have difficulty in appreciating colour patterns, and Engineering students find difficulty in the colours used in electrical circuits. Knowledge of colour blindness can alert the staff to these students' difficulties.

5.022. Minor Refractive Errors.

The finding that 11.3% of students had uncorrected minor refractive errors would indicate the usefulness of the routine medical examination procedure.

Students with such refractive errors were advised to seek the opinion of an Ophthalmologist.

Statistical analysis indicates that there was no sex difference in the incidence of this condition ($0.90 > P > 0.80$).

5.020 (cont)

5.023. Myopia.

361 students had this condition, and in 16.3% correction had been made but 7.7% remained either uncorrected or insufficiently corrected.

48 students from South East Asia had myopia, which represents 55.8% of such students, whereas 313 other students were myopic in 1,414 students (22.2%). This variation is significant ($P<0.001$).

268 males and 93 female students in this survey were myopic, and analysis shows no sex difference ($P>0.90$).

All types of refractive error.

If students with both types of refractive error are combined, the following is found -

Minor refractive error	- uncorrected	- 11.3%
	- corrected	- 4.1%
Myopia	- uncorrected	- 7.7%
	- corrected	- 16.3%
Total refractive errors		39.4%

Thacker (40) in a survey of the vision of College Students at the University of Illinois found that 37.7% of freshmen had a visual defect, with 11.0% having a defect which was uncorrected. This compares with 19.0% of students in this survey with an uncorrected visual defect.

6.020 (cont)

Bard (39) records that in a survey at the University of Hong Kong 10.6% of students had uncorrected visual defects, and 53.3% had defective eyesight which had been corrected. 20.4% of the students in this survey had corrected visual defects. Kadri (35) at the University of Singapore records that 58.2% of students had a visual acuity of less than 6/6, which included those with corrected and uncorrected vision. This compares to 39.4% of this Study. These variations in University students of South East Asia may be related to the increased incidence of myopia in students from that area.

Johnston et Alia (28) records that students with uncorrected vision of 6/9 or less represent 19.4% of male students and 20.6% of female students.

In a later survey, Johnston et Alia (29) records that 17.3% of males and 19.0% of females had a vision of 6/9 or less. These compare with students with uncorrected vision in this survey, namely males - 19.3% and females - 18.3%.

19.0% of students in this sample had uncorrected visual defects, and were in need of ophthalmological review. It has been found that students in senior years of their course need review of their vision. When facilities are available for the expansion of the Health Service, it will be recommended that all students should be reviewed by another routine medical examination. This recommendation

5.020 (cont)

has been based on the findings of the medical examination of Medical students in the 3rd. and 5th. years and of Dental students in the 4th. year.

5.024. Amblyopia and Squint.

2.3% of students had amblyopia and 0.3% had an uncorrected squint.

5.025. Other eye conditions.

Where any abnormality was detected, and when treatment was advisable, arrangements were made for appropriate investigation and treatment. 11 students had received serious eye injury in their childhood or adolescence.

5.020 Summary - Eyes and Vision.

Colour vision has been considered. The percentage of male students who have this condition does not differ in male students born in Australia or the United Kingdom. A similar incidence of colour blind students has been reported at Queen's University of Belfast. There appears to be a difference in the percentage of male students from South East Asia in this survey who are colour blind when compared to surveys at the University of Singapore and Hong Kong.

Refractive Errors. 11.3% of these students have minor refractive errors and 7.7% have uncorrected myopia. It suggests that 1 in 5 students have visual defects which would interfere with study and could be a factor in poor examination results. The usefulness of the routine medical examination is demonstrated by the detection and correction of this potential cause of poor University performance by students.

It has been suggested that extension of the routine medical examination to senior students should be made when facilities become available.

5.030. EARS AND HEARING.

Introduction and Procedure.

Due to lack of suitable facilities and to the fact that the Health Service is situated close to a main traffic road in the University, audiometric testing was found to be impossible.

Students hearing was tested by two methods. At interview before the medical examination, the medical officer spoke to the student with the head turned away from the student who was seated 5 feet away. Following the auroscopic examination, the examiner's watch was held 5 inches from each ear.

When it was found that a student had some loss of hearing, a full audiometric investigation was obtained.

Results.

5.031. Deafness.

Deafness in one ear - 42 students

Deafness in both ears - 16 students

58 students had evidence of deafness, representing 3.9% of all students.

56 of these students gave the history of otitis media in childhood, while another suffered from nerve deafness and another had a congenital absence of the external ear.

5.032. Abnormalities of the Ear.

Wax - 194 (12.9%) had this condition which was relieved by appropriate treatment.

5.030 (cont)

Otitis Externa - 7 active cases were recorded, resulting from seborrhoea or infection following swimming.

Otitis Media - 5 acute cases were detected at examination, which resulted from acute upper respiratory tract infection.

3 students had a perforation of the tympanic membrane.

5 students gave the history of myringotomy.

Mastoidectomy - 11 students had operative procedures on the mastoid antrum, but only one of these students had a residual deafness.

Otitis Interna - One student had a unilateral nerve deafness with a continuous tinnitus.

Congenital absence of the external ear - One male student reported with this condition. The right pinna was absent and there was no evidence of an external canal. The tuning fork test revealed that bone conduction was present in the affected ear.

Discussion.

As most cases of deafness concerned the conducting mechanism of the ear, discovery of the state of deafness is important. When deafness has been discovered, the student is referred for otological investigation.

5.030 (cont)

29 students gave the history of deafness, but at medical examination 58 had some degree of deafness. This suggests that 50% of these students were unaware of their hearing deficiency.

Deafness resulting fror wax in the auditory canal was not included in these results for deafness. If wax is found, no assessment of hearing is made until the wax has been cleared. The appearance of wax may appear a trivial matter, but in the context of Student Health it can be a serious matter which is illustrated by the following student history. This student was examined before this Study began.

> "In 1963, a student reported to the Health Service for medical examination. He commenced his course in 1962, but, owing to the alteration to the facilities at the Health Service, this examination was not performed until late in 1963. He was found to have a severe degree of deafness which was relieved by clearance of the wax. He failed his University examination for the second time in 1963, and he was considered for preclusion from his Faculty. The facts of the deafness were reported to the Faculty concerned, and he was allowed to continue his studies in 1964. He has had no further failures in his course."

This case has been recorded to illustrate the need to make a careful appraisal of the hearing of students. It seems

5.030 (cont)

incredible that such a matter as wax in the ears should cause a major setback to the student and his family.

Johnston et Alia (28) record a defective hearing rate of 7.2% in males and 5.5% in females in their 1948-54 survey. In 1961 Johnston et Alia (29) recorded a deafness rate of 3.8% in males and 2.7% in females. The finding that 3.9% of the students in this sample suffer with deafness leaves no room for complacency.

5.030 - Summary - Ears and Hearing

Deafness has been found in 3.9% of the students examined.

50% of the students with deafness had no knowledge of the condition.

The deafness which may result from accumulation of wax is shown to be important in the context of student health.

5.040. NOSE AND THROAT.

Procedure.

The pharynx and nasal cavity were examined routinely, and the abnormal findings recorded.

Results.

Acute tonsillitis, or heavily infected tonsils with exudate	14
Deviated nasal septum	9
Ulceration of the anterior nasal septum causing epistaxis	3
Sinusitis	15
Allergic rhinitis	8
Acute pharyngitis	8
Stammer	7

No case of nasal polypi was observed.

Discussion.

Students with evidence of an abnormal state were referred for treatment to the family physician or to the nose and throat consultant.

Students with a deviated septum recorded an injury to the nose while playing a sport of 'a bodily contact' type.

Allergic rhinitis found at medical examination in the routine observance of students or at the casualty service presents a major problem in student health work. The 'hay-fever' season coincides with the time of intensive study in the preparation for the annual examinations. By the use of anti-histamine drugs of the 'retard' type, such drugs being taken at bedtime, the maximal depression from such drugs

5.040 (cont)

occurs during sleep. Such a regime aids in the relief of the 'hay-fever' and as a side effect assures the student of good sleep and a calm approach to the preparation for the examinations.

It has been observed that most South East Asian students are free of 'hay-fever' during the first year in Australia, but in the second and subsequent years most of these students suffer from this disability to a severe degree. It has also been observed that such students who are most disturbed about their examinations suffer more severely from this allergic condition. When these students return home for a long vacation, they are free of the condition during the next year but the cycle returns in subsequent years in Australia.

The seven students with stammer were advised to seek psychiatric help. Three students refused investigation in this manner with the typical reply - "I have become accustomed to the impediment, and it does not worry me". All of the other students improved with this psychiatric advice.

At the Student Health Conference in August 1966, Mrs. M. Horan (42) presented a paper on 'Stammer'. This worker detailed the results of speech training of students with stammer with the use of a metronome. The steady beat aids the patient to phrase the spoken words. Work on this basis is proceeding with the assistance of the Department of Mental

5.040 (cont)

Health at the University of Adelaide.

342 males (30.3%) and 143 females (38.4%) had tonsillectomy and adenoidectomy performed. Bailey (43) in a survey at Cambridge University recorded that 47.9% of males and 37.3% of females had been operated upon for these procedures.

Other operative procedures included one tracheotomy in a female student following trauma to her jaw and face. 9 students had antrostomy performed, and 1 student had a cleft palate and hare lip corrected. 2 thyroglossal cyst and 1 branchial cyst had been removed, and 4 male students had submitted to submucous resection of the nasal septum following nasal injury.

5.040 - Summary - Nose and Throat.

Abnormal conditions of this sytem have been recorded and discussed.

The problem of 'allergic rhinitis' in students is considered with particular reference to the use of the 'retard' type of anti-histamines and to the illness as it affects students from South East Asia.

The use of the metronome in the speech training of the student with 'stammer' has been considered.

5.050. THE RESPIRATORY SYSTEM.

Procedure.

Disease and the history of previous illness of this system are considered.

Mantoux tests and Chest X-rays are reviewed in Chapter 7.

Results.

5.051. Pulmonary Tuberculosis.

No case of active pulmonary tuberculosis was found in the students of this sample. Two healed primary foci indicated that two students had suffered from this disease as children.

5.052. Asthma.

Asthma was considered by classifying such students into the age of the last attack. The findings are shown in Table 50.

History of Asthma

History	Male	Female	Total
Last attack - 10 years or less	17	11	28
Last attack - 11 to 14 years	12	3	15
Last attack - 15 years +	24	3	27
Active attack	7	1	8
Total	60(5.3%)	18(4.8%)	78(5.2%)

Table 50.

78 students (5.2%) indicated the history of asthma, including the 8 students who were having active attacks.

5.050 (cont)

5.053. Bronchitis.

4 students had evidence of an acute attack of bronchitis at the time of the medical examination, and 41 students had recorded a previous attack of this disease.

One student had required bronchoscopy for removal of a pea-nut from a bronchus.

5.054. Bronchiectasis.

One female student had active bronchiectasis, and she was receiving active treatment by postural draining and physiotherapy. This student and one other had lobectomy performed, and both students recorded the history of whooping cough as infants.

Discussion.

5.051. Pulmonary Tuberculosis.

No active case of this illness was found in these students.

5.052. Asthma.

Analysis shows no variation of the history of asthma and of the incidence of the last attack when the sex of student are considered. (History of asthma $P > 0.90$, Last attack - 10 years or less $0.30 > P > 0.20$, 11 to 14 years $0.90 > P > 0.80$).

5.3% of males and 4.8% of females in this survey had suffered from asthma which compares with a study of Leigh (44)

5.050 (cont)
who found that 4.2% of males and 1.4% of females had suffered from this illness.

5.053. Bronchitis.

No student with the history of this illness showed evidence of permanent lung damage.

5.054. Bronchiectasis.

Both students had lobectomy performed, one with complete relief of this illness, and the other continued with active disease. Both students recorded the history of whooping cough as infants.

Summary.

The occurence of pulmonary tuberculosis, asthma, acute bronchitis and bronchiectasis have been discussed.

5.060. THE CIRCULATORY SYSTEM.

Introduction.

This system is considered in the following sections -

5.061. Blood Pressure.

A comparison is made between the blood pressures of male and female students, and between the blood pressure of students with a permanent residence in Australia and students from South East Asia.

5.062. Pulse Rate.

5.063. Cardiac Murmurs.

These findings have been described in two sub-sections -

Murmurs considered functional

Murmurs considered organic.

5.064. Haemoglobin estimations of female students in the sample.

5.065. Other vascular abnormalities.

5.061. Blood Pressure.

Procedure.

All readings were taken with a standard mercury manometer, the diastolic reading being recorded at the complete cessation of sound.

Results.

Table 51A. shows the findings of male students, permanently resident in Australia, 51B. male students from 'other areas' and 51C. male students from South East Asia. The blood pressures of female students are similarly recorded in Tables 52A., 52B., and 52C.

Males - Blood Pressure of Students permanently resident in Australia.

Systolic Pressure	Diastolic Pressure 40	45	50	55	60	65	70	75	80	85	90	95	100	Total
175					1		1							2
170					1		1			1				3
165							1	1	1				1	4
160	1			1			1	2	4	1	1	1	1	13
155					1		1	2	6		1			11
150				1	9	2	5	14	10		3			44
145					6	2	9	5	12		1			35
140			1	2	15	11	31	19	27	3	4			113
135				6	13	13	47	30	19	1	2			131
130				5	6	27	44	12	13	2	2			111
125	1			6	30	48	49	17	3	1	1			156
120			1	7	30	71	24	7	9	1	4			154
115			3	4	31	60	23	4	6	1				132
110			1	8	10	22	8	2	1					52
105		1	3	14	20	6	8							52
100			1	8	6	2								17
95					1									1
90			2											2
Total	2	1	12	62	180	264	253	115	111	11	19	1	2	1,033

Table 51A.

5.061 (cont)

Males - Blood Pressure of Students from 'Other Areas'

		Diastolic Pressure								
		55	60	65	70	75	80	85	90	Total
	150				1					1
	140					1	1	1		3
Systolic	135	1				1				2
	125		1	2						3
Pressure	120		1	3	1					5
	115	2		1	2	1				6
	110			1						1
	Total	3	2	7	4	3	1	1		21

Table 51B.

Males - Blood Pressure of Students from South East Asia

		Diastolic Pressure									
		50	55	60	65	70	75	80	85	90	Total
	160								1		1
	155							1			1
	145						1				1
	140					1	1				2
Systolic	135				2	4	1			1	8
	130			1		2	1				4
Pressure	125			4	2	5					11
	120			2	6	1					9
	115		1	3	6		2	1			13
	110	1		2	5	1					9
	105		2	4							6
	100	2	2		2						6
	95		2	1							3
	Total	3	7	17	23	14	6	2	1	1	74

Table 51C.

5.061 (cont)

Females - Blood Pressure of students permanently resident in Australia.

Systolic Pressure	Diastolic Pressure 45	50	55	60	65	70	75	80	85	90	95	Total
160					1							1
155										1	1	2
150						1						1
140				1	3	1		1			1	7
135				1	3	2	2	4		1	1	14
130				1	5	2	2	6				16
125				6	10	13	7	2				38
120		1	1	9	25	13	7	3	2			61
115		2	3	23	33	12	7	4				84
110		1	6	10	32	3	2					54
105		3	18	23	7	4	1					56
100		3	8	5		1						17
95			2		1							3
90		1	1									2
Total		11	39	79	120	52	28	20	2	2	3	356

Table 52A.

Females - Blood Pressure - students from 'Other Areas'

Systolic Pressure	Diastolic Pressure 55	60	65	Total
115		1	1	2
110			1	1
105	1			1
Total	1	1	2	4

Table 52B.

Females - Blood Pressure - Students from South East Asia.

Systolic Pressure	Diastolic Pressure 50	55	60	65	70	75	Total
125						1	1
115		1		1	1		3
105			1	1			2
100		1		1			2
95		2					2
90	2						2
Total	2	4	1	3	1	1	12

Table 52C.

5.061 (cont)

Discussion.

Students from 'other areas' are of an heterogeneous group, and they are discarded for the purposes of the discussion of this topic.

Table 53 summarises the peaks of the blood pressure distribution curves and the statistical means.

Areas of students	Sex	Peak	Statistical mean
Permanently in Australia	Male	125/65	127/68
	Female	115/65	116/65
South East Asia	Male	115/65	120/65
	Female	105/60	104/59

Table 53.

Statistical analysis of the blood pressure of students with permanent residence in Australia shows that male students have a significantly higher mean systolic and diastolic pressure than such female students. (Systolic pressure - $P<0.001$, diastolic pressure - $P<0.001$). Similar analysis of the blood pressures of students from South East Asia shows that these male students have a significantly higher mean systolic pressure than females from this area (systolic pressure - $P<0.001$), but there is no significant variation in the mean diastolic pressures ($0.10>P>0.05$).

Best and Taylor (45) state that "in women up to the time of the menopause, the systolic pressure is from 4 to 5 mm lower than in men of the same age".

5.061 (cont)

This Study suggests a male mean systolic pressure elevation of 11 mm. when compared with the systolic pressure of female students, if students with a permanent residence in Australia are considered. A similar elevation of 16 mm. in students from South East Asia is noted.

Ganong (46) records, when subjects are lying at rest, that "at the age of 17.5 years, males show a mean systolic pressure of 117 and females 117, whereas at this age males show a mean diastolic pressure of 68 and females 70".

As the mean age of these students living permanently in Australia is 18, a comparison can be made and this is shown in Table 54.

Sex of Student	Living permanently in Australia	Ganong
Males - systolic	127	117
- diastolic	68	68
Females - systolic	116	117
- diastolic	65	70

Table 54.

The mean systolic pressure of male students with a permanent home in Australia appears to be 10 mm. greater than the findings of Ganong, while the diastolic pressure seems to be the same. The mean systolic pressure of female students with a permanent home in Australia relates closely to the findings of Ganong, but the diastolic pressure seems

5.061 (cont)

to be 5 mm lower than the mean recorded by Ganong.

A similar comparison of the findings of this survey and those of Johnston et Alia (28) and (29) is recorded in Table 55.

Sex of Students	Students with permanent home in Australia	Johnston et Alia 1949-54	Johnston et Alia 1961
Males - systolic	127	130	126
- diastolic	68	71	71
Females - systolic	116	125	118
- diastolic	65	71	68

Table 55.

Comparison of the surveys suggest that male and female students in the surveys at Queen's University of Belfast have higher mean diastolic pressures than the students of this sample whose home is permanently in Australia.

Palmer and Muench (47) at Harvard University record that slightly more than 10% of young males examined had a systolic pressure above 140. This finding compares with the data of male students with permanent residence in Australia where 10.8% of such male students show a blood pressure of over 140, and with the data of male students from South East Asia where 4.1% of these students show a similar elevated systolic blood pressure.

In 1923, Alvarez, Walzan and Mahoney (48) in a similar American University study found that 22% of male freshmen had

5.061 (cont)

a systolic blood pressure of over 140.

Hines (49) records the following findings, when he investigated the 'Range of Blood Pressure and the subsequent development of Hypertension'.

Hines - 'Range of BP and the subsequent development of Hypertension'.

Blood Pressure		Subsequent development of Hypertension (160/ 100) Follow up of 10 years	20 years
Systolic	130-139	10%	35%
	140-149	40%	60%
	150 and over	65%	80%
Diastolic	75 - 79	2%	5%
	80-84	3%	7%
	85-89	25%	58%
	90-94	40%	70%
	95 and over	70%	85%

Table 56.

If the prediction of Hines is applied to students with a systolic pressure of 140 and over who have a permanent home in Australia, the suggestion can be made that in 10 years 4% of males and 1% of females will suffer from hypertension, while in 20 years 6% of males and 2% of females will be so affected. If the diastolic pressure of 90 or over is considered in such students, it could be postulated that 1% of males and 0.6% of females will suffer from hypertension in 10 years, whereas in 20 years 2% of males and 1% of females will have

5.061 (cont)

hypertensive disease.

Similar studies of diastolic pressure by Berkson and Stammler (50) predict that men between the ages of 20 and 30 will have hypertensive disease in the following manner -

Berkson and Stammler (50)

Diastolic pressure - less than 80 - 12.8% developed hypertension in middle age.

- 80-84 - 15.4% developed hypertension in middle age.

- 90 and greater - 36% developed hypertension in middle age.

With the findings of such potentially hypertensive students, Harris, Sokolow, Carpenter, Freedman and Hunt (51) in 'Responses to psychogenic stress in persons who are potentially hypertensive' associate the emotional state of students with hypertension. Under the assessment of the emotional state and attitudes, as made in this Thesis, these potentially hypertensive students are further considered in Chapter 6.

Summary - The Blood pressure findings.

The blood pressure of male and female students has been reported in students with a permanent home in Australia and in students from South East Asia.

5.061 (cont)

The mean blood pressure findings are -

Students living permanently in Australia - Males - 127/68

- Females - 116/65

Students from South East Asia - Males - 120/65

- Females - 104/59.

Analysis indicates that male students living permanently in Australia show a higher systolic and diastolic pressure than females from this area of classification. Students from South East Asia show a significantly higher mean systolic pressure in males than females, but no statistical variation in the mean diastolic pressure in the sexes.

Comparisons of the findings of other studies of blood pressure indicate that male students living in Australia have higher systolic mean pressures.

The incidence of male students with a systolic pressure of 140 or more in this sample is similar to the results of Palmer and Muench at Harvard University, but not to the results of Alvares et alia in 1923.

The 'subsequent development of hypertension' is considered, and this aspect leads into factors seen in the assessment of the emotional state and attitudes of students who are potentially hypertensive, and this matter is discussed in Chapter 6.

5.062. Pulse Rate.

Procedure.

Pulse rate readings were made before the examination of the heart. The pulse was counted for 30 seconds, and this was repeated after the examination of the heart. This latter reading was recorded.

Results.

The findings are shown in Appendix 14, and Fig. 9A (Males), and Fig. 9B (Females).

Discussion.

The peak of the pulse rate curve for males and females is 72.

Maximal readings are recorded for males and females at 130, while the minimal readings are males - 44, and females - 52.

Analysis of appendix 14 shows that the male mean pulse is 72, and the female mean pulse is 77.

Further analysis shows that the mean female pulse is faster than the mean male pulse ($P < 0.001$).

Johnston et alia (28) found the mean pulse of males was 78, and the mean pulse of females was 79 in the 1949-54 survey at Queen's University of Belfast. A later study by Johnston et alia (29) records the mean pulse rate at males - 75, females - 78. These findings compare closely to the findings of this survey.

5.062 (cont)

Summary.

The histogram of pulse rates of students shows a peak at 72 for males and females, but the statistical mean is a pulse of 72 in males and 77 in females.

The findings resemble closely those of Johnston et alia at Queen's University of Belfast.

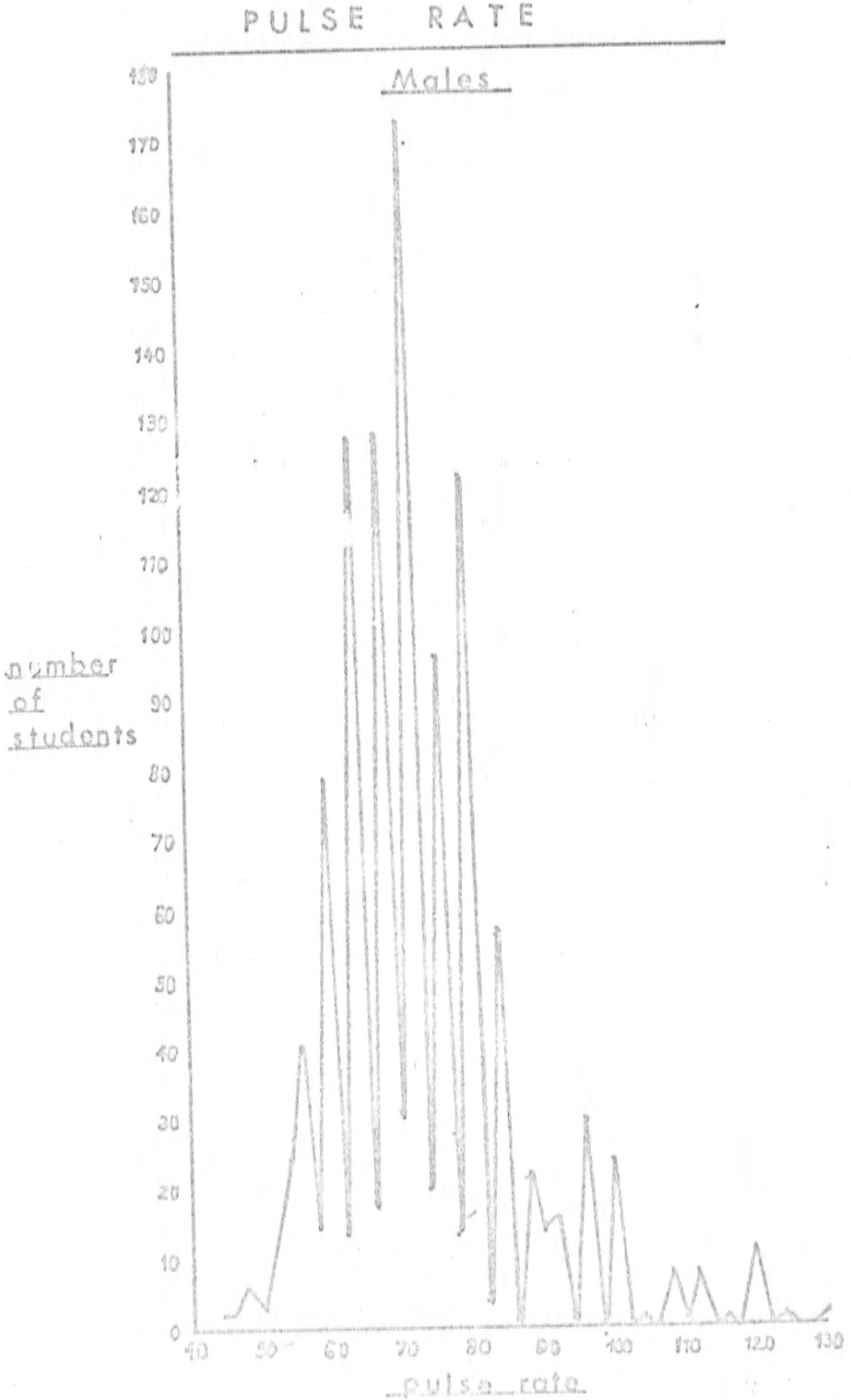

PULSE RATE
Males
number of students
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
40
50
60
70
80
90
100
110
120
130
pulse rate

FIG 9A

5.063. Cardiac Murmurs.

Procedure.

After eliciting the apex beat, the stethoscopic examination was made in two positions, and they were the student lying and sitting. When any abnormal heart sound was detected, the character of the murmur was noted. Any variation of the murmur in expiration or inspiration or with the student lying or sitting was recorded. When a murmur ceased or altered to a great degree on change of posture or breathing, the classification was made, but a constant bruit was assessed as an 'organic murmur'.

Results

The findings of these abnormal findings are recorded in Appendix 15, Appendix 15A. concerning 'functional murmurs' and Appendix 15B. 'organic murmurs'.

Findings of Appendix 15.

Sex	Functional	Organic	Total
Males	81 (7.2% of males)	48 (4.2% of males)	129
Females	16 (4.3% of females)	15 (4.0% of females)	31
Total	97 (6.5% of students)	63 (4.2% of students)	160

Table 57.

'Organic' murmurs are subdivided in Table 58 into the 'type of lesion' and into those considered 'established organic lesion' and 'suspected organic lesion'.

5,063 (cont)

Type of Lesion.	Established		Suspected		Total
	Males	Females	Males	Females	
Atrial septal defect	3	1	4	-	8
Ventricular septal defect	3	3	1	1	8
Fallot's Tetralogy	1	-	-	-	1
Rheumatic heart disease					
- with history	3	1	-	-	4
- without history	2	-	12	3	17
Pulmonary stenosis	1	-	8	4	13
Congenital aortic valve	2	-	6	1	9
Tricuspid lesion	-	-	-	2	2
Thyrotoxicosis	-	1	-	-	1
Total	15	6	31	11	63

Table 58.

Discussion.

17 students recorded the history of rheumatic fever, but only 4 of these students had evidence of rheumatic mitral valvular disease. 17 students were suspected of rheumatic valvular disease, yet none of these students had indicated any history of rheumatic fever or rheumatism.

In the student health context, students with cardiac murmurs present a difficult problem. After an adequate description of the bruit has been made and recorded, two further factors require consideration, namely the cardiac efficiency and the emotional state and attitudes of the student. Obviously it would be unwise to inform a student that organic heart disease is suspected in the early adjustment period to the University or in the period just before an examination. In the same way, difficulty is experienced where a student has

5,663 (cont)

serious developmental problems or he or she has to contend with a stressful life situation.

The examining medical officer must assess any future action in relation to the student's University course, and, when the decision is made to defer informing the student, the medical officer should advise the student to report again for a further medical examination before graduation. At this time a full cardiological examination may be advised. To notify the student of heart disease at an inappropriate time may interfere with the academic perfomance of a student and precipitate a cardiac neurosis. This latter illness did occur in one student of the sample (Case 16, Appendix 15B).

'A male student, aged 18 years, was examined routinely. He played football and tennis without discomfort or shortness of breath. Blood pressure was recorded at 160/40, and he was 68" in height and weighed 150 lbs. This student had difficulties in relating to group participation, of vocational identity, of conflict of dependence and independence, and domestic problems. His father had died tragically, and this student was the only son and the eldest child of the family. The methods of University study were unknown to his family which imposed an additional stress situation on the student.

Examination of the heart revealed no cardiac

5.063 (cont)

enlargement with the apex beat in the vith intercostal space, 3 inches from the midline. He had a constant aortic and mitral systolic murmur, the aortic bruit being transmitted into the neck. No diastolic element was noted in the murmur.

On these findings, the student was referred to a cardiologist for further opinion and investigation. The cardiologist reported -

"soft mid-systolic ejection murmur, maximal in the aortic area and transmitted into the neck. It is possible that the murmur is innocent. At the same time one could not exclude some minor anomaly of the aortic valve. Encourage him to treat his heart as normal".

Subsequently this student joined the Citizen Military Forces with a certificate of fitness from the cardiologist. During summer exercises with the Army, he developed fatigue, dyspnoea and an inability to complete route marches. The student complained of a suffocating sensation when he engaged in exercises of a type which two years before he could manage. He was later diagnosed with 'effort syndrome'. '

The history of this student is recorded to demonstrate the potential hazards of consultant referral without adequate

5.063 (cont)

regard of 'cardiac efficiency' and assessment of the 'emotional state and attitudes'.

As a result of this situation, a policy is recommended as follows, when 'organic heart disease' is suspected.

i. Careful appraisal of the murmur.

ii. Appraisal of the exercise taken, and whether the dyspnoea experienced is in excess of that which may be normally expected during exercise.

iii. Appraisal of the emotional state and attitudes of the student.

iv. Appreciation of the time of the medical examination in relation to the early adjustment to the University or to proximity of the examinations.

If the condition is causing symptoms and a danger to life, there is no doubt that the student should have a full cardiological investigation. Otherwise, the student is requested to return at a later time for re-examination. With the maturity gained after a period at the University, the condition can be explained to the student and a cardiological referral will cause less stress.

Summary.

6.5% of the students in the sample were considered to have 'functional murmurs', whereas 4.2% of the students had 'Organic murmurs'. The 'organic' murmurs were divided into

5,063 (cont)

those with 'established' and 'suspected' heart disease. The types of 'organic' lesions are recorded in Table 58.

In those students with a history of rheumatic fever, 4 of the 17 had residual cardiac valvular disease. 17 students were suspected with rheumatic valvular disease, yet none of these students had any history of rheumatic fever.

The need for care in informing a student of a cardiac lesion is discussed, and certain broad principles of future policy have been suggested in such circumstances. These suggestions are -

appraisal of the murmur

appraisal of cardiac efficiency

appraisal of the emotional state and attitudes of students

appreciation of the time of the medical examination.

5.064. Haemoglobin Estimation of Female students.

Procedure.

365 of the 372 female students were tested for haemoglobin level at the time of the medical examination.

Results.

	Sahli Scale						
	80%	85%	90%	95%	100%	105%	110%
	Grammes per cent						
	13.8	14.6	15.5	16.4	17.3	18.0	18.8
Number of Students	11	21	106	105	89	29	4

Table 59.

Discussion.

Fig. 10 and Table 59 indicates that the peak of the distribution curve lies between the haemoglobin readings of 90% to 95%. The mean reading is 95%.

138 students show a haemoglobin reading of 90% or less. The inclusion of this test in the routine medical examination appears justified. The students with the reading of 90% or below were advised to have further investigation of a complete blood picture and to seek treatment with iron therapy in appropriate cases.

HAEMOGLOBIN

Female Students

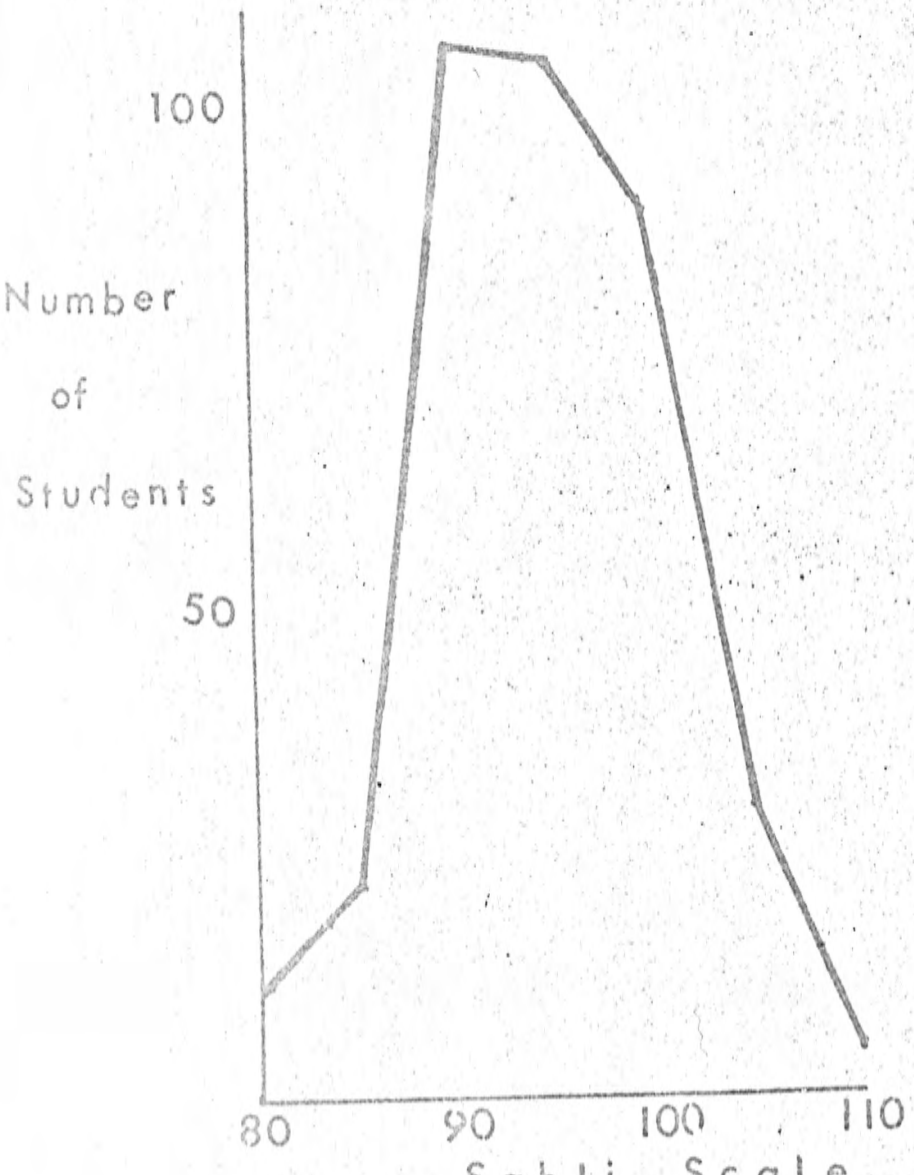


FIG 10

5.065. Other vascular abnormalities.

Varicose veins were noticed in 11 males and 3 females. One of these male students had a bilateral condition which was corrected by surgery.

Thyrotoxicosis was recorded in 3 female students. One severe case was referred to hospital for further investigation and treatment (The case recorded in 5.063) while the other cases were under supervision by their personal physician.

One female student had undergone operative treatment 4 years beforehand for a coarctation of the aorta.

5.070. GASTRO-INTESTINAL SYSTEM.

5.071. Dental State.

Minute areas of caries may not have been detected, and, therefore the findings are those of gross caries noted.

Dental Condition	Males	Females
Caries	36	2
Gingivitis	9	1
False teeth	9	2
Impacted 3rd. molar	12	3
Orthodontic treatment	10	3
Very irregular teeth	2	1
Chipped incisor teeth	6	2
Total	84	14

Table 60.

Discussion. In considering Table 60, there is no evidence to suggest that dental disease occurs at an increased rate in either sex. Overall, a good impression has been gained of the students' attitudes towards their dental care. It was apparent that most students attend regularly for dental inspection and treatment.

5.072. Herniae. Two male students had an inguinal hernia, and another male had a small ventral hernia. One female student had an umbilical hernia. 37 Males (3.3%) and 4 Females (1.1%) had undergone a repair of a hernia.

5.073. Abdominal findings. 4 male students had a palpable liver following a recent attack of glandular fever, and one of these students had a palpable spleen.

No student was found with a duodenal ulcer, but 3 males and 2 females had dyspepsia. All of these students had experienced difficulty in adjustment to the University, and this was most evident in two males from South East Asia.

5.080. GENITO-URINARY.

Procedure.

This section is considered in the following manner -

Males - urinary findings, abnormal states and operative procedures.

Females - urinary findings, menstruation and dysmenorrhoea, and operative procedures.

All urine specimens were tested for albumen and sugar by 'clinistix' tape.

5.081. Males.

Results and discussion.

After the discovery of glycosuria and a blood sugar curve, one male student was diagnosed as a diabetic.

Another two male students were found with glycosuria, but blood sugar curves indicated a low renal threshold to sugar.

Orthostatic albuminuria was diagnosed in six males. Three tests were conducted at weekly intervals, two specimens being obtained - one before breakfast and the other following breakfast. In all cases the first specimen on rising was clear but the later specimen showed albumen. The blood pressure of these students were - 120/60, 130/70, 150/60, 115/60, 140/70 and 140/70.

Constant albuminuria was found in 4 male students. One student was admitted to hospital for investigation, where

5.080 (cont)

renal biopsy was normal, but cystoscopy revealed a trigonitis. His blood pressure was 140/80. Another student was investigated in hospital, and he was found to have no other abnormality of the urinary tract. Two male students elected to be investigated and treated by their family physicians. No genito-urinary abnormalities were detected. The blood pressure of these three students were 130/70, 135/65 and 125/70.

A student with haematuria was referred to hospital for investigation. The history indicated that these attacks were associated with long distance running. His blood pressure was 160/55.

4 male students had a hydrocele.

57 (5.0%) males had a varicocele on the left side.

Unilateral undescended testis was diagnosed in 5 students, and another student had a bilateral condition. All were referred for a further opinion and treatment.

Atrophied testis in 4 students was the result of a mumps orchitis, and another student had received a severe knock with a cricket ball resulting in the atrophied state of one testis. The condition was unilateral in all cases.

Hypospadias was diagnosed in 3 students.

Other conditions connected to this genital system were gynaecomastia and pituitary dysfunction. The student with the first condition was reassured, and the other was referred for

5,080 (cont)

investigation and treatment to a General Hospital.

The history of operative procedures revealed that -

Orchidectomy had been performed in 5 students as a result of torsion testis or the inability to correct an undescended testis.

Undescended testis had been surgically corrected in six students. One student presented with the first stage Torek operation intact. As he had 'forgotten to go back' to the surgeon for the second stage, arrangements were made for the completion of the operation 4 years after the initial stage 1 of the procedure.

Orchiopexy was performed for the correction of torsion of a testis on one student, and three students underwent surgical procedure on an hydrocele and one student had received treatment on hypospadias by plastic surgery.

It was noted that no varicocele had been submitted to surgical treatment.

General Discussion - Male Genito urinary findings.

The student with diabetes mellitis was discovered before the illness caused any symptoms. The two male students with a low renal threshold to sugar will have further blood sugar curves performed in the final years of their courses to confirm the previous findings.

5.000 (cont)

All male students with orthostatic albuminuria were advised to report annually for reassessment, while those with constant albuminuria were placed in the position where they will have supervision of the condition.

Haematuria has been noted in one student following long distance running. Suitable arrangements have been made for the estimation of the red blood cells and myo-haemoglobin in the urine in such students

Those students with the abnormalities, hydrocele or undescended testes were referred for treatment, The student with bilateral undescended testes was resistant to the medical examination, and he had difficulties relating to group participation in that he played no sport, he refused to swim, and he led an 'isolate' type of life. Fortunately both testes were palpable in the inguinal canals, and it was anticipated that surgical correction would be aesthetically acceptable to the student, and that his attitudes to group situations would improve.

One in twenty male students had a left sided varicocele.

All students with unilateral atrophy of the testis were reassured that the normal testis was of the correct size. Such students were advised to seek early advice if sterility problems arise in their married lives.

5.080 (cont)

The student who had not reported back for the second stage of the Torek operation is worthy of comment. This student had accepted the fact that the left side of the scrotum would be permanently joined to his left thigh. By appropriate surgical treatment, he will be relieved of a physical abnormality and he will be able to normally participate in group activities such as sporting and swimming without embarrassment.

5.082. Females.

Results and Discussion.

No female student had glycosuria.

Orthostatic albuminuria was diagnosed in one female student, and she was referred to her family physician for investigation. Her blood pressure was 120/60, and she remains under the supervision of her family physician for this condition.

Constant albuminuria was found in one female student, but hospital investigation revealed no apparent cause for this state. Her blood pressure was 120/60 and intravenous pyelography was normal. She will remain under supervision by her family physician.

A coliform bacillus was isolated at culture in another student with Acute Cystitis. This student from South East Asia was given appropriate treatment after

5.080 (cont)

sensitisation tests to antibiotics had been made.

The female students who had pain or no pain with the menses were classified into 10 categories, and the findings of such dysmenorrhoea are shown in Table 61.

Description of Type of Pain	Type	Number and %	
No pain	0	195	52.4%
Pain before period	1	16	4.3%
Pain 1st. day	2	91	24.4%
Pain 2nd. day only	3	-	
Pain 3rd. day only	4	-	
Pain day before and 1st. day	5	22	5.9%
Pain 1st. and 2nd. days	6	31	8.3%
Pain 2nd. and 3rd. days	7	-	
Pain before period, 1st. and 2nd. days	8	9	2.3%
Pain 1st., 2nd. and 3rd. days	9	4	1.1%

Table 61.

Amenorrhoea was recorded in 4 students. One student was pregnant, while 3 students indicated no menses for 2 years, and for these conditions they had received advice from their family Physician or gynaecologist.

Two students had been operated upon for ovarian cysts, one of whom had the diagnosis of endometriosis established at that time.

One female student was suspected of having pituitary dysfunction, and this was confirmed by further investigation.

General discussion - Female Genito-urinary findings.

All abnormal urinary findings in female students were investigated and treated.

5.080 (cont)

In student health practice, painful menses presents two problems. Interference with lectures, tutorials and practical session is common, and this requires special facilities for rest and treatment of such students. A greater problem arises when students anticipate that a painful period and the examinations will coincide. At the time of publication of the examination programme, a state of anxiety arises in such female students, and this anxiety reduces the efficiency of study during the third term. If a female student suffers from painful periods, the position is explained and the student is referred for treatment of the condition. By limiting the amount of pain at period times, the amount of anxiety decreases and allows the student to make better examination preparations. Where relief is not possible by analgesics, it may be suggested that the family physician or gynaecologist may use ovulation suppressant drugs on such students to ensure a painless period on two or three occasions before the University examinations.

5.090. NERVOUS SYSTEM.

Introduction.

In this young group of adults, this system would be expected to show few abnormalities, and this has been confirmed by this survey.

Results.

One male student had suffered a right hemiplegia as the result of a rupture of a berry aneurysm 3 years previously. Surgical procedure was successful in saving his life. This student was right handed, but he had adapted to writing normally with the left hand.

Another male student had suffered from a fracture at the base of the skull 2 years beforehand, and this had caused a left facial paralysis. Another student was recovering from a Bell's palsy which started 6 months previously.

5.100. SKELETAL SYSTEM.

Introduction.

This system is considered in the sequence used in the 'Student Health Service Form'. The matters considered are - a. Posture, b. spine and thorax, c. Limbs and muscles, d. joints, e. feet, f. hands. Conditions found to be abnormal were recorded.

Procedure.

When the examination on the couch was completed, students were requested to stand erect, touch the toes, and then stand erect and rise on the toes.

Measurements of chest in inspiration, expiration and abdominal girth were made.

If scoliosis was noted, measurements of the legs were made from the anterior superior spine to the distal tip of the medial malleolus of the tibia of the corresponding leg.

Results.

5.101. Posture.

Students were assessed with 'good', 'fair' or 'bad' posture, and the findings are shown in Table 62.

Posture	Males	%	Females	%	Total	%
'Good'	788	(69.9%)	263	(70.7%)	1,051	(70.1%)
'Fair'	318	(28.2%)	90	(24.2%)	408	(27.2%)
'Bad'	22	(1.9%)	19	(5.1%)	41	(2.7%)

Table 62.

5.100 (cont)

5.102. Spine and Thorax.

Abnormalities found are shown in Table 63.

Abnormality	Males	Females	Total
Congenital depression of sternum	8	2	10
Lordosis	37 (3.2%)	14 (3.8%)	51
Kyphosis	86 (7.6%)	37 (9.9%)	123
Scoliosis - Postural	188 (16.7%)	41 (11.0%)	229
- Shortening of Leg	81 (7.2%)	11 (3.0%)	92
Funnel chest	21 (1.9%)	1 (0.3%)	22
Flattened chest	37 (3.3%)	-	37
Irregular chest cage	2	-	2
Schuermann's Disease	1	-	1
'Sway back'	-	1	1
'Poker back'	4	2	6
'Winging of scapula'	2	1	3

Table 63.

5.103. Limbs and Muscles.

Abnormalities found are shown in Table 64.

Abnormality	Males	Females	Total
Bow Legs	153 (13.6%)	18 (4.8%)	171
Knock knees	47 (4.2%)	38 (10.2%)	85
Pigeon toes	5	2	7
Wasting of a lower leg (talipes)	3	-	3
Torn Quadriceps (Injury)	1	-	1
Torn Gastrocnaemius (Injury)	1	-	1
Shortening of tibia (old fracture)	1	-	1
Congenital absence Rt pectoralis	1	-	1
Volkmann's Ischaemic contracture - Rt forearm	1		1
Exostosis Lt femur	1		1

Table 64.

5.100 (cont)

5.104. Joints.

Abnormalities found are shown in Table 65.

Joint	Abnormality	Male	Female	Total
Hip	Perthe's Disease	3	-	3
	Congenital dislocation	-	1	1
Knee	Bruised knee (sport)	2	1	3
	Prepatellar bursitis	3	-	3
	Lax cruciate ligaments	7	1	8
	Sprain of medial or lateral knee ligaments	3	1	4
	Medial meniscus injury	-	1	1
	Removal of patella	1	1	2
	Osteo-chondritis	1	1	2
	Chondro-malacia	1	-	1
Ankle	Potts Fracture (Skiing)	1	-	1
	Sprained ankle	4	-	4
	Tenosynovitis (dorsi-flexors)	-	2	2
Shoulder	Recurrent dislocation	1	-	1
	Osteo-arthritis of acromio-clavicular joint	1	-	1
	Fracture of clavicle	1	-	1
Elbow	Fracture of humerus with involvement of elbow	-	1	1
	Loss of extension	3	2	5
Wrist	Colles Fracture	1	-	1
	Loss of pronation	-	1	1

Table 65.

5.100 (cont)

5.105. Feet and f.Hands.

Abnormalities found are shown in Table 66.

Feet	Abnormalities	Male	Female	Total
	Flat feet	187 (16.6%)	11 (2.9%)	198
	High Arches	67 (5.9%)	1 (0.3%)	68
	Everted ankles	191 (16.9%)	15 (4.0%)	206
	Hallux valgus	7 (0.6%)	9 (2.4%)	16
	Hammer toes	9	2	11
	Callosities	4	2	6
	Ingrowing toenails	16	1	17
	Amputation of distal phalanx	2	-	2
	Calcaneal spur	1	1	2
	Syndactyly	-	1	1
	Talipes (all surgically corrected)	5	2	7
Hands	Clubbing - bronchiectasis	1	-	1
	rheumatic heart	1	-	1
	Tetralogy of Fallot	1	-	1
	Nail biting	109 (9.7%)	6 (2.6%)	115
	Mallet finger	2	-	2
	Syndactyly	1	-	1
	Ulnar nerve paralysis	1	-	1
	Amputations (result of trauma)	6	-	6

Table 66.

5.100 (cont)

Discussion.

5.101. Posture. Table 62 shows that 69.9% of males and 70.7% of females were assessed with 'good' posture. The occurrence of 'good' posture is similar in the sexes, and this is confirmed by statistical analysis. A significant difference is shown by 1.9% of males and 5.1% of females with 'bad posture' ($0.01 > P > 0.001$).

Observation of students throughout the year shows an interesting change of posture. At the commencement of the University year, students appear to have an upright stance, but, as the year progresses and as the examinations come closer, many students show a postural kyphosis. Perhaps this variation is caused by students sitting at their desk for long periods of study.

As 31.1% of male students and 29.3% of female students are assessed with 'fair' or 'bad' posture, it might be supposed that an increase in the amount of physical exercise taken by these students would be beneficial.

5.102. Spine and Thorax. Table 63 shows that 10 students had a congenital depression of the sternum, of whom three had corrective surgery. The other 7 students were encouraged to consider surgery for this condition at a future time.

Students with scoliosis, lordosis, and kyphosis were

5.100 (cont)

advised of the correct position while at study, including the best type of chair which should be used. Similarly advice was offered to change frequently the hand which carried a satchel.

One type of postural scoliosis was noticed in students who are regular members of a rowing crew. When the student rows 'stroke' side, the back muscles show increased development on the left side, and the inequality of these muscles appears to produce a scoliosis. The opposite effect is seen on students who row 'bow' side. This matter has been discussed with rowers, but they have stated that it is difficult to change 'sides'.

Scoliosis resulting from a shortening of a leg involved 92 students. This shortening varied from $\frac{1}{4}$" to 1". Six cases resulted from illness or injury, but the remainder gave no such history. The majority of the students in this Study were aged 2 to 4 years, when the community experienced a severe epidemic of poliomyelitis. The tentative explanation might be made that such students suffered a mild sub-clinical attack of poliomyelitis, thus causing slight muscle wasting with retardation of the normal growth of the leg.

Twenty students gave the history of an attack of poliomyelitis. In these 20 students, the following residual abnormalities were noted:-

5.100 (cont)

Funnel chest - one female student.

Kyphosis - one female student.

Postural scoliosis (no leg shortening) - Four males and one female.

Scoliosis (shortening of a leg) - One male student.

Normal spines were seen in 14 of these students. This suggests that a high standard of medical and paramedical care was given to these students in the acute and convalescent stages of the illness.

Twenty students of the twenty-two who had the disability of a funnel chest had suffered from asthma in early life. It could be suggested that treatment by physiotherapy in the early phases of the asthma might have prevented these deformities.

5.103. Limbs and Muscles. Table 64. 256 students had bowing of the legs or knock knees. Correction of these deformities may have been made if the 'Pre-school Examination' as advocated by Professor W. McDonald (41) had been carried out.

Males appear to show a significant predominance in the number of students suffering from 'bow legs' ($P < 0.001$), but the opposite situation appears in students with 'knock knees', where it is suggestive that females show the greater incidence ($P < 0.001$).

The condition of 'bow legs' and 'knock knees' in

5.100 (cont)
female students causes concern to this age group. Many times the examiner was asked - "What can be done about my knees?"

5.104. Joints. The list of joint injuries (Table 65) appears formidable. The majority of these disabilities were caused by sport injury. The Health Service advocates participation in sport and exercise, and these injuries set somewhat of a dilemma. In order to reduce sport injury to a minimum, two preventive aspects require consideration by the Student Health Officer.

A general impression has been gained that there is evidence to show that a player having adequate training in the art of the sport and adequate physical fitness will suffer less injury than the poorly trained player. The second impression has been gained that good supervision of a game by a referee of a bodily contact sport reduces the incidence of severe injury.

The medical officer of a Health Service should observe sports where injuries are common, and advise the administrators of the sport on these two aspects.

The medical officer has a duty as well to establish a scheme whereby a player who may be injured receives adequate immediate first aid treatment, and adequate medical supervision of the injury as soon as possible.

Senior University students find difficulty in continuing the sports to which they have become accustomed. Not only is time limited, but the fear of possible injury which

5.100 (cont)
could interfere with their studies and training encourage these students to forego 'bodily contact' sports. These students are encouraged to continue exercise by playing games of squash and badminton.

Injury by motor vehicles presents a serious problem. 104 male students and 18 female students in this Study had been injured in a motor vehicle accident, and two male students had died from motor vehicle accidents after the medical examination. During 1966, four University students died as the result of a vehicular accident. This death toll appears to have been accepted without any undue concern. It has beennoted that three of these students were killed when in a car with others of their own age. The tentative suggestion could be made that the students were asserting their adulthood and release from parental control by taking un-necessary risks. A record of such deaths are made in the Health Service, and a comparison is made with the emotional assessment of the student at the time of medical examination.

5.105. Feet. Table 66. There is evidence that the majority of students with flat feet and everted ankles are males (Flat feet - $P < 0.001$, and Everted ankles - $P < 0.001$).

Flat feet appear to be of genetic origin, whilst everted ankles follow the history of ankle injury.

Hallux valgus appears with greater frequency in females.

S.100 (cont)

Hands. Six male students had required amputation of one or more distal phalanges after trauma which includes severe lacerations from exploding chemicals in four cases. As these explosions occurred while thestudent was attending a secondary school, it might be proposed that teachers and students in Chemistry lessons should be made aware of the dangers of such explosions.

Summary - Skeletal System.

Abnormalities of posture, spine and thorax, limbs and muscles, joints, feet and hands have been considered.

69.9% of male students and 70.7% of female students were assessed with 'good' posture, whereas 1.9% of males and 5.1% of females showed a 'bad' posture.

Comments have been made about the reasons for students having a poorer posture towards the end of the University year, and measures of advice for the correction of this state have been made.

Scoliosis has been considered, and factors such as rowing and shortening of a leg have been discussed. The latter cause of scoliosis has been extended with the consideration of poliomyelitis in the form of a subclinical attack in 1949-51.

The incidence if 'bow legs' and 'knock knees' has been discussed, and the 'Pre-school Examination' of children as formulated by Professor W. McDonald has been suggested

5.100 (cont)

as a means of finding these deformaties in children at an age when treatment is possible.

Injuries to joints and the relation to sport and vehicular accidents have been considered.

It has been suggested that flat feet are of genetic origin, whereas everted ankles result from previous ankle injury.

Six male students were found with amputation of phalanges of the hands, and in four cases these injuries resulted from chemical explosions. Preventive measures aimed at teachers and students of secondary school chemistry classes have been suggested.

5.110. SKINS.

Introduction.

Abnormalities of the skin appear as an obvious physical disability to students. It is found that students ask questions about skin conditions, and reassurance about the correction relieves the student of undue anxiety. Skin conditions are often used by students as a means of approaching the medical officer to disclose other emotional problems.

Procedure.

Skin diseases were recorded on the 'Student Health Form' under the following headings - 1. Acne, 2. Allergies, 3. Boils, 4. Dermatitis, 5. Fungal infections, 6. Warts, 7. Seborrhoea, and 8. Other skin conditions.

Results.

The results are shown in Table 67.

Abnormalities	Males	Females	Total
Acne	266	45	311
Allergies	3	1	4
Boils	-	-	-
Dermatitis	17	2	19
Fungus (including 4 ringworm and 3 tinea cruris)	71	12	83
Warts	39	13	52
Seborrhoea	14	2	16
Cellulitis	3	1	4
Birth marks (2 cm. or greater)	6	2	8
Naevus (2 cm. or greater)	2	-	2
Hirsutism (females)		2	2
Scars - burns and large lacerations	13	3	16
Lichen planus	2	1	3
Hyperhydrosis hands and feet	8	2	10
Pilonoidal sinus	2	1	3
Intertrigo	1	-	1
Psoriasis	2	-	2
Leucoderma	4	-	4
Keloid scarring	2	-	2
Sarcosis bardi	2	-	2

Table 67.

6,110 (cont)

Discussion.

Acne presents a major problem. 311 students were found to suffer from this disease. Such students were advised to seek appropriate treatment, or in minor cases students were advised concerning attention to diet and hygiene.

Male students showed a greater incidence of acne ($P < 0.001$).

In these students there appeared an emotional factor of 'difficulty in being accepted by others with this obvious skin disease'. For this reason, the medical officer should give sufficient time in the discussion and possible means of correction of this condition.

There appeared to be an increase in the incidence of fungal disease in students who played sport or who lived in a University College. Advice was given to students concerning efficient measures of personal hygiene to correct this skin complaint.

Summary - Skin.

The incidence of skin disabilities has been described.

The incidence of acne in students is high, and the importance of a full discussion about this condition with students has been stressed.

The need for discussion on the personal hygiene of students who play sport and who are members of a University College has been suggested in the prevention of fungal diseases.

CHAPTER 6. EMOTIONAL STATE AND ATTITUDES.

6.10. Assessment of the Emotional State and Attitudes of Students in this sample.

6.20. Assessment of the Emotional State and Attitudes in Relation to -

6.21. Smoking.

6.22. Alcohol.

6.23. Students taking no exercise.

6.24. Relaxation.

6.25. Blood Pressure.

6.26. Pulse.

6.27. Asthma.

6.28. Painful menses of female students.

6.29. Posture.

6.30. Acne.

6.00. EMOTIONAL STATE AND ATTITUDES.

Introduction.

A concept of the assessment of the emotional state and attitudes of students has been put forward in Chapter 1 (1.20), and the method of application has been detailed in Chapter 2 (2.10).

Procedure.

In order that an abnormality which was found at the Physical examination would not influence the medical officer in the assessment of the emotional state of a student, the assessment of the emotional state and attitudes of the student was made at the introductory interview before the medical examination was begun. The results of the assessment were recorded on the performance sheet at this interview.

Throughout this Study, the emotional assessment of students is shown by the following abbreviations -

Students who are assessed with -

Good adjustment to all conflicts and problems	'N'
Conflict of Dependence and Independence	'M'
Conflict of vocational identity	'I'
Conflict of group participation	'R'
Exogenous problems - Domestic	'D'
- Economic	'E'
- Lodging	'L'
- Study	'A'
- Sexual	'S'

6.00 (cont)

In the analysis of the various aspects of assessment, the exogenous problems are grouped together by 'X'

Students with proven psychosis 'P'

Some students were assessed with multiple 'conflicts' or 'problems', and these were recorded by the use of these abbreviations.

This Chapter discusses the assessment of the emotional state and attitudes in relation to the following aspects of students' habits and health.

6.10. Assessment of the Emotional state and attitudes of students in this sample.

6.20. Assessment of the Emotional state and attitudes in relation to -

6.21. Smoking.

6.22. Alcohol.

6.23. Students taking no exercise.

6.24. Relaxation.

6.25. Blood pressure.

6.26. Pulse.

6.27. Asthma.

6.28. Painful menses of female students.

6.29. Posture.

6.30. Acne.

In Chapter 9, the assessment of the emotional state and attitudes is related to the Academic Performance of these student

6.10. ASSESSMENT OF THE EMOTIONAL STATE AND ATTITUDES OF THE STUDENTS IN THIS SAMPLE.

Results.

The pattern of assessment of the emotional state and attitudes of these students is shown in Tables 68A (Males) and 68B (Females).

Males - Emotional state and attitudes.

Assessment	Number of Males	Number in classification									
		N	M	I	R	D	E	X L	A	S	P
'N'	474	474									
'M'	188		188								
'I'	60			60							
'X'	82					48	13	9	12	-	
'MI'	19		19	19							
'IX'	13			13		4	5	2	2	-	
'MIX'	1		1	1		-	-	-	1	-	
'MX'	28		28			22	2	3	1	-	
'XX'	7					5	5	-	3	1	
'RM'	55		55		55						
'RI'	39			39	39						
'RX'	5				5	2	-	1	2	-	
'RIM'	76		76	76	76						
'RIX'	29			29	29	16	1	6	6	-	
'RIMX'	9		9	9	9	5	-	-	4	-	
'RIXX'	9			9	9	5	4	2	7	-	
'RMX'	23		23		23	14	1	3	5	-	
'RMXX'	3		3		3	3	2	1	-	-	
'RXX'	1				1	-	-	1	1	-	
'RXXX'	1				1	1	1	-	1	-	
'RP'	6										6
Total	1,128	474	402	255	256	125	34	28	45	1	6
								233			

Table 68A.

324 students were assessed with multiple difficulties.

6.10 (cont)

Females - Emotional State and Attitudes.

Assessment	Number of Females	Number in Assessment									
		N	M	I	R	D	E	X L	A	S	P
'N'	200	200									
'M'	45		45								
'I'	16			16							
'X'	19					18	-	-	-	1	
'IM'	10		10	10							
'IX'	4			4		3	-	1	-	-	
'MX'	11		11			8	1	1	1	-	
'XX'	2					2	-	1	1	-	
'RM'	8		8		8						
'RI'	5			5	5						
'RX'	4				4	3	-	1	-	-	
'RIM'	20		20	20	20						
'RIX'	7			7	7	4	-	2	-	1	
'RIMX'	6		6	6	6	5	-	1	-	-	
'RMX'	13		13		13	8	-	3	2	-	
'RP'	2				2						2
Total	372	200	113	68	65	51	1	10	4	2	2
								68			

Table 68B.

92 students were assessed with multiple difficulties.

Discussion.

Comparison of the assessment of the emotional state and attitudes of male and female students (Tables 68A and 68B) shows -

6.10 (cont)

'Normal' Students ('N')

42.0% of males and 53.8% of females were so assessed.

SEX DISTRIBUTION – 'NORMAL' STUDENTS

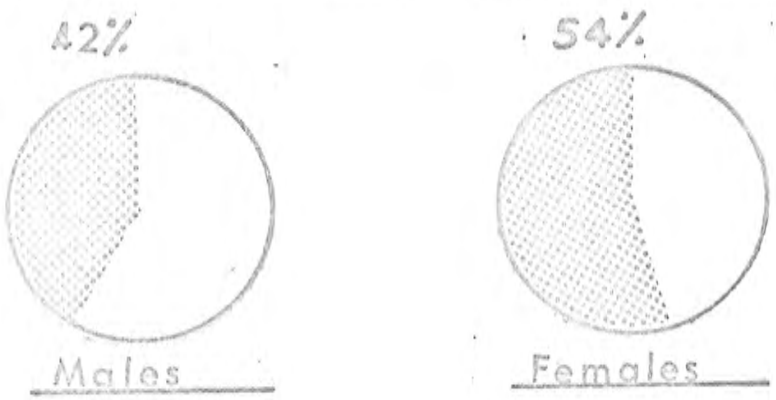


FIG 11

More female students were assessed as 'Normal' ($0.02 > P > 0.01$).

Conflict of Dependence and Independence ('M')

35.6% of males and 30.4% of females were so assessed.

Analysis shows the same incidence of assessment of male and female students with this conflict.

Conflict of Vocational Identity ('I')

22.7% of males and 18.3% of females were so assessed.

Analysis shows no variation of the sexes.

5.10 (cont)

Conflict of group participation ('R')

22.7% of males and 17.5% of females were so assessed.

Analysis shows no variation of the sexes.

Problems of an exogenous type ('X').

20.4% of males and 18.3% of females were so assessed.

Analysis shows no variation of the sexes.

3.5% of male and female students had received or were receiving treatment for a psychotic illness.

In dealing with students, the impression is gained that the number of minor personal emotional disturbances is increasing. As these emotional disturbances interfere with normal University study it is suggested that the assessment of the emotional state and attitudes at the routine medical examination may enable the medical officer to anticipate such problems.

When the conflict or problem has been defined, and when the student is willing to discuss such matters, insight into his or her particular difficulty can be given, and the medical officer may be able to assist in solving the problem. The clarification of such difficulties need not necessarily be made by the medical officer. Other members of the 'Welfare Team' such as the Student Counsellor, the Warden of the Union, or the Academic Staff including Assistants to the Deans of Faculties

6.10 (cont)

and the Tutorial Staff may be better qualified to assist the student.

Summary - Assessment of the emotional state and attitudes of students.

The assessment of the emotional state and attitudes of students was made at the introductory interview before the medical examination.

Comparison of the pattern of the assessment of emotional state and attitudes shows that more females were assessed as 'normal' (Males - 42.0% and Females - 53.8%). The incidence of 'conflicts' and 'problems' is found to be similar in male and female students. The 'conflict of dependence and independence' has been found in 35.6% of males and 30.4% of females, the 'Conflict of Vocational Identity' in 22.7% of males and 18.3% of females, the 'conflict of group participation' in 22.7% of males and 17.5% of females, and 'Exogenous problems' in 20.4% of males and 18.3% of females.

Emotional difficulties in students is discussed, and the place of the 'Welfare Team' in assisting students has been mentioned.

6.21. Assessment of the Emotional state and attitudes in students who smoke.

The pattern of students who smoke is shown in Table 23 (4.42), and the assessment of the emotional state and attitudes of such students is shown in Tables 69A and 69B.

Results.

Assessment of the Emotional state and attitudes of Male Students who Smoke.

Assessment	Number of males	Numbers in classification									
		N	M	I	R	D	E	S L	A	S	P
'N'	89	89									
'M'	39		39								
'I'	23			23							
'X'	22					11	3	1	7	-	
'IM'	7		7	7							
'IX'	4			4		2	1	-	1	-	
'MX'	5		5			4	1	-	-	-	
'XX'	5					5	3	-	1	1	
'RM'	10		10		10						
'RI'	9			9	9						
'RIM'	21		21	21	21						
'RIX'	8			8	8	3	-	2	3	-	
'RMX'	5		5		5	5	-	-	-	-	
'RXX'	1				1	1	-	-	1	-	
'RIXX'	4			4	4	1	3	1	3	-	
'RIMX'	1		1	1	1	1	-	-	-	-	
'RP'	1				1						1
Total	254	89	88	77	60	33	11	4	16	1	1
								65			

Table 69A.

6.21 (cont)

Assessment of the Emotional state and attitudes of Female students who smoke.

Assessment	Number of Females	Number in classification									
		N	M	I	R	D	E	X L	A	S	P
'N'	19	19									
'M'	6		6								
'I'	1			1							
'X'	2					2	-	-	-	-	
'IM'	2		2	2							
'IX'	2			2		1	-	1	-	-	
'MX'	3		3			3	-	-	-	-	
'XX'	1					1	-	1	-	-	
'RM'	1		1		1						
'RI'	1			1	1						
'RIM'	2		2	2	2						
'RIX'	3			3	3	2	-	-	-	1	
'RIM'	1		1	1	1	1	-	-	-	-	
'RP'	1				1						1
Total	45	19	15	12	9	10	-	2	-	1	1
								13			

Table 69B.

Discussion.

Statistical analysis of the patterns of Tables 68A and 69A (Males) and of Tables 68B and 69B (Females) shows that -

a. More male students smoke when they were assessed with the 'Conflict of Vocational Identity' ($0.02 > P > 0.01$).

b. The pattern of the emotional state and attitudes are the same, otherwise, in students who smoke and students in the total survey.

6.22. Assessment of the Emotional state and attitudes of students who drink alcohol.

The incidence of student with this habit is shown in Table 29 (4.60). The pattern of assessment of the emotional state and attitudes is shown in Tables 70A (Males) and 70B (Females).

Results.

Assessment of the Emotional State and Attitudes of Male students who drink alcohol.

Assessment	Number of Males	Number in classification									P
		N	M	I	R	D	E	X L	A	S	
'N'	229	229									
'M'	83		83								
'I'	38			38							
'X'	40					25	6	3	6	-	
'IM'	18		18	18							
'IX'	10			10		2	4	2	2	-	
'MX'	11		11			9	1	-	1	-	
'XX'	6					4	4	1	3	-	
'RM'	21		21		21						
'RI'	12			12	12						
'RIM'	31		31	31	31						
'RIX'	13			13	13	6	1	1	5	-	
'RMX'	6		6		6	5	-	-	1	-	
'RIXX'	3			3	3	2	2	-	2	-	
'RIMX'	4		4	4	4	3	-	-	1	-	
'RP'	3				3						3
Total	528	229	174	129	93	56	18	7	21	-	3
								102			

Table 70A.

6.22 (cont)

Assessment of the Emotional State and Attitudes of Females students who drink alcohol.

Assessment	Number of Females	Number in classification N	M	I	R	D	E	X L	A	S	P
'N'	68	68									
'M'	15		15								
'I'	4			4							
'X'	7					7	-	-	-	-	
'IM'	3		3	3							
'IX'	2			2		2	-	-	-	-	
'MX'	5		5			5	-	-	-	-	
'XX'	1					1	-	1	-	-	
'RM'	1		1		1						
'RIM'	8		8	8	8						
'RIX'	5			5	5	3	-	-	1	1	
'RMX'	2		2		2	1	-	-	1	-	
'RXX'	1				1	1	-	-	1	-	
'IMX'	3		3	3	3	2	-	1	-	-	
Total	125	68	37	25	20	22	-	2	3	1	
								28			

Table 70B.

Discussion.

Statistical analysis of Tables 68A. and 70A. (Males) and 68B. and 70B. shows that -

a. Fewer male students drink alcohol, when they were assessed with the 'conflict of group participation' ($0.02 > P > 0.01$).

The finding is consistent with the suggestion that students with 'conflict of group participation' tend to withdraw from social activities and find difficulty in the group situation. They are the 'isolate' students.

6.22 (cont)

b. The emotional states and attitudes of male and female students who drink alcohol are otherwise the same as those of students of the whole sample in the Study.

Summary. - Students who take alcohol; the assessment of emotional states and attitudes.

Male students who take alcohol appear to show a decreased incidence of the 'conflict of group participation'.

6.23. Assessment of the Emotional States and Attitudes of Students who take no exercise during the 1st, 2nd., 3rd. Terms and the pre-examination vacation and Examinations.

183 male students and 70 female students take no exercise during the University Year.

The Emotional states and attitudes of these students is shown in Tables 71A. (Males) and 71B. (Females).

It is emphasised that the assessment of the emotional state and attitude was made before the details of exercise were recorded on the 'Performance Sheet'.

Results.

Assessment of the Emotional States and Attitudes of Male students who take no exercise during the University Year.

Assessment	Number of Males	Number in classification									
		N	M	I	R	D	E	X L	A	S	P
'N'	26	26									
'M'	33		33								
'I'	14			14							
'X'	15					10	3	-	2	-	
'IM'	4		4	4							
'IX'	2			2		-	2	-	-	-	
'MX'	1		1			-	-	1	-	-	
'YX'	1					1	-	-	-	1	
'RM'	16		16		16						
'RI'	14			14	14						
'RIM'	36		36	36	36						
'RIX'	9			9	9	4	1	1	3	-	
'RMX'	1		1		1	1	-	-	-	-	
'RIMX'	3		3	3	3	2	-	-	1	-	
'RIXX'	5			5	5	4	2	-	4	-	
'RMXX'	2		2		2	2	1	1	-	-	
'RP'	1										1
Total	183	26	96	87	87	24	9	3	10	1	1
								47			

Table 71A.

6.23 (cont)

Assessment of the Emotional States and Attitudes of Female students who take no exercise during the University year.

Assessment	Number of Females	Number in classification									
		N	M	I	R	D	E	X L	A	S	P
'N'	23	23									
'M'	14		14								
'I'	1			1							
'X'	2					2	-	-	-	-	
'IM'	1		1	1							
'MX'	7		7			5	-	1	1	-	
'XX'	1					1	-	1	-	-	
'RM'	2		2		2						
'RI'	2			2	2						
'RIM'	7		7	7	7						
'RIX'	3			3	3	2	-	-	-	1	
'RMX'	4		4		4	2	-	1	1	-	
'RIMX'	2		2	2	2	2	-	-	-	-	
'RMXX'	1		1		1	1	-	-	-	1	
Total	70	23	38	16	21	15	-	3	2	2	-
								22			

Table 71B.

Discussion.

Analysis of Tables 68A. and 71A. (Males) and 68B. and 71B. (Females) suggest the following.

'Normal Students who take no exercise ('N').

15.3% of males and 32.9% of females were so assessed. This is shown in Fig. 12A.



FIG 12A

6.23 (cont)

Analysis shows that male students who do not take exercise are less likely to be assessed as 'emotionally normal' ($P<0.001$). Female students who do not take exercise show the same pattern as males in this emotional grouping ($0.02>P>0.01$).

Conflict of Dependence and Independence ('M').

52.4% of males and 54.3% of females were so assessed. This is shown in Fig. 12B.

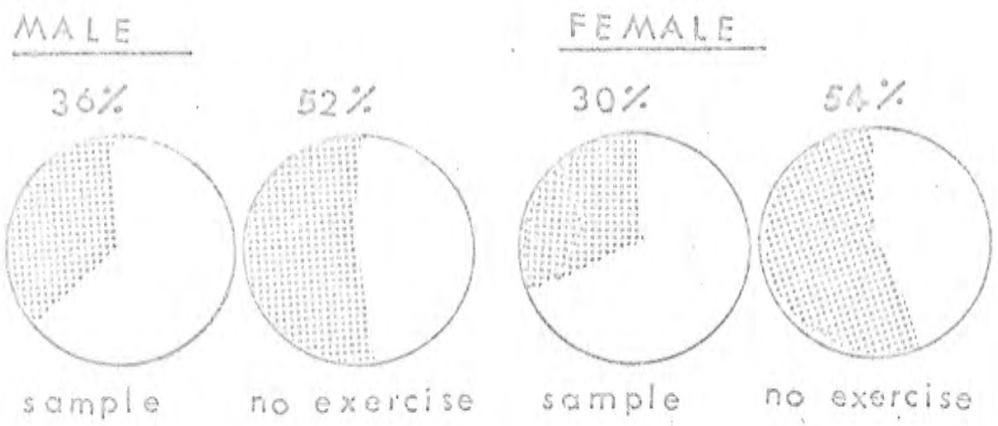


FIG 12B

Statistical analysis appears to show that male and female students who take no exercise have an increased incidence of the 'conflict of dependence and independence'. (Males - $P<0.001$ and Females $P<0.001$).

6.23 (cont)

Conflict of vocational identity ('I').

47.5% of males and 22.9% of female students were so assessed. This is shown in Fig. 12C.

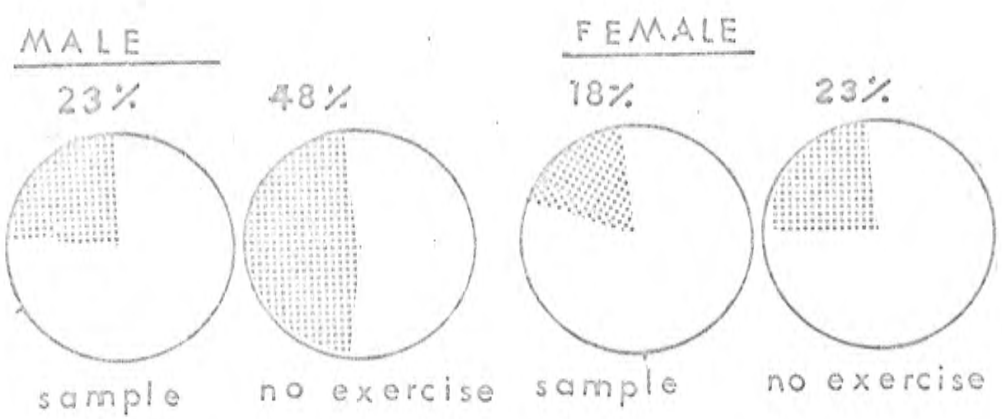


FIG 12C

Statistical analysis appears to show that male students who take no exercise have an increased incidence of the 'conflict of vocational identity' ($P < 0.001$). There is however no difference in 'conflict of identity' between female students who take no exercise and the survey of all female students ($0.50 > P > 0.30$).

6.23 (cont)

Conflict of group participation ('R').

47.5% of males and 30.0% of females were so assessed. This is shown in Fig. 12D.

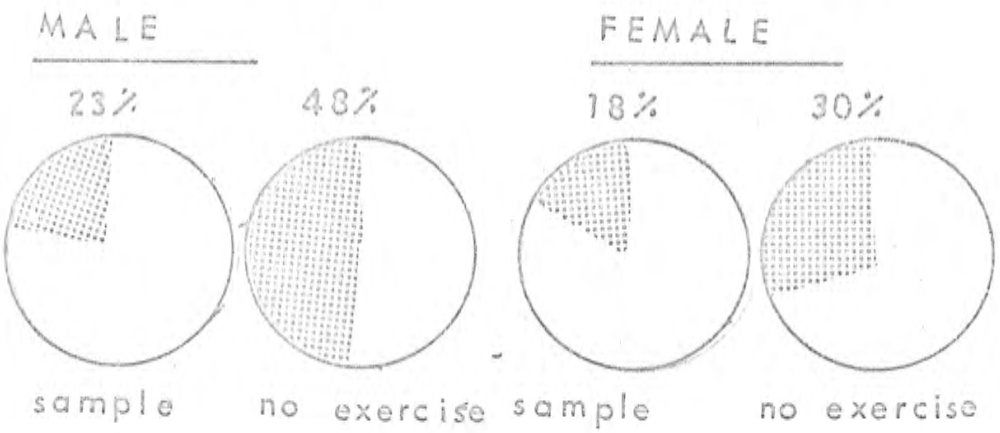


FIG 12 D

Statistical analysis appears to show that male and female students who take no exercise have an increased incidence of the 'conflict of group participation' (Males - $P<0.0$ Females - $0.01>P>0.001$).

Problems of an exogenous type ('X').

25.6% of males and 31.4% of females were so assessed. This is shown in Fig. 12E.

6.23 (cont)

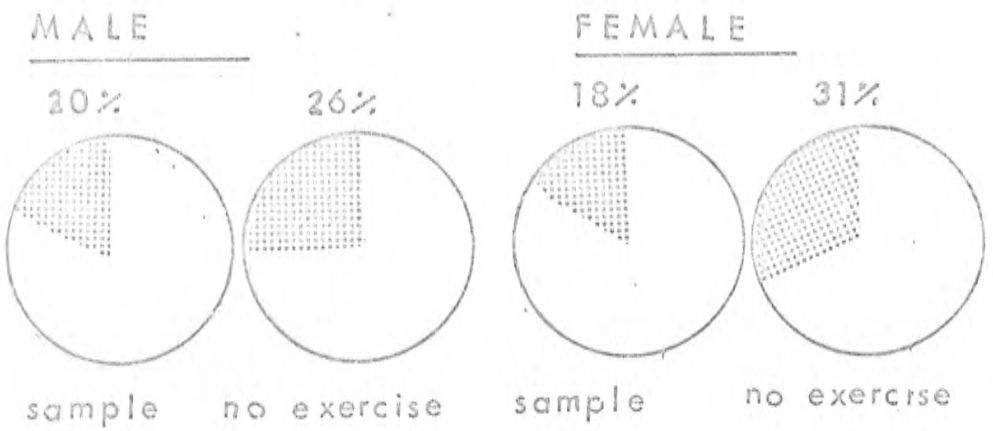


FIG 12E

Tables 68A. and 71A. show no difference in male students when 'problems of an exogenous type' are considered. ($0.20 > P > 0.10$). Female students who do not take exercise show an increased incidence of 'problems of an exogenous type' ($0.02 > P > 0.01$).

From these considerations, it has been found that male and female students who take no exercise are less likely to be assessed as 'normal'. As a corollary it is suggested that male and female students who are assessed as 'normal' are more likely to take exercise.

6.23 (cont)

Male students who do not take exercise show an increased tendency to experience the 'conflict of vocational identity', but this tendency is not apparent in female students. On the other hand male students with 'exogenous problems' seem to play the same amount of sport as male students in the whole study, whereas female students with exogenous problems are less likely to take exercise.

Vocation and career are important to male students for acquiring 'total identity', that is a profession, a wife, a home and a family. Vocation seems not as important to the female student. Her vocation and career will take a place of secondary importance to becoming a wife and a mother, in normal circumstances. It would appear that female students are less concerned about the 'conflict of vocational identity', and that they are willing to participate in sport to a greater extent than male students with such a conflict.

It appears that male students worry less about the 'problems of an exogenous type' so that their participation in sport and exercise is unaffected. On the other hand it would appear that female students are more concerned with these 'problems' so that they show an increased tendency not to take exercise.

Not all students with developmental or exogenous problems would be interested in discussing such problems with the

6.23 (cont)

medical officer at the final interview, nor would they welcome referral to a Student Counsellor or Psychiatrist for further counselling. These findings suggest a method of helping such resistant students. Whether the student takes no exercise as a result of or due to an emotional problem, it might be suggested that encouragement to participate in some form of exercise may help.

Summary - Students who take no exercise.

It has been found that students who take no exercise are less likely to be assessed as 'normal'. This finding suggests that encouragement to take exercise may be a method of helping students.

Male students who take no exercise appear to show a higher incidence of conflicts of 'dependence and independence', 'vocational identity' and 'group participation', whereas female students of this grouping show a higher incidence of the conflicts of 'dependence and independence' and 'group participation' and problems of an 'exogenous type'.

6.24. Students who relax by reading or watching television.

Analysis of the findings show no statistical difference between the emotional state and attitudes of students who relax by reading and by watching television compared with the whole sample of students.

6.25. The Emotional State and Attitudes of Students with Elevated Blood Pressure.

In Chapter 5 (5.061), the mean blood pressure of students who live permanently in Australia was Males - 127/63, and Females - 116/65.

Accepting the fact that an increase of 10 mm. would be above 'normal', the number of male students with blood pressure readings of 140/80 or more, and female students with blood pressure readings of 135/75 are recorded in Table 72A., together with the results of the assessment of the emotional state and attitudes.

The male and female students in this matching include those 'permanently resident in Australia', 'other areas' and 'South East Asia'.

The matching is made in three ways -

a. Students showing elevation of the systolic and diastolic blood pressure.

b. Students showing an elevated systolic pressure.

c. Students showing elevation of the diastolic pressure.

6.25 (cont)

Results.

The Emotional state and attitude of Students with an elevated blood pressure.

	Males							Females						
	Blood pressure 140/80 or more							Blood pressure 135/75 or more						
		Number in classification							Number in classification					
Assessment	Number	N	M	I	R	X	P	Number	N	M	I	R	X	P
'N'	13	13						6	6					
'M'	19		19					3		3				
'I'	4			4				-						
'X'	9					9		1					1	
'IM'	1		1	1				-						
'IX'	1			1		1		-						
'RM'	6		6		6			2		2		2		
'RI'	4			4	4			1			1	1		
'RX'	4				4	4		-						
'RIM'	15		15	15	15			4		4	4	4		
'RIX'	-							2			2	2	2	
'RIXX'	2			2	2	4*		-						
'RIMX'	1		1	1	1	1		1		1	1	1	1	
'RMXX'	3		3		3	6*		1		1		1	2*	
Total	82	13	45	28	35	25	-	21	6	11	8	11	6	

Table 72A.

(* These students had problems of an exogenous type in more than one type of such problem.)

6.25 (cont)

The Emotional State and Attitude of Students with an elevated systolic blood pressure.

	Males							Females						
	Blood pressure 140 or more/normal							Blood pressure 135 or more/normal						
		Number in classification							Number in classification					
Assessment	Number	N	M	I	R	X	P	Number	N	M	I	R	X	P
'N'	41	41						8	8					
'M'	37		37					4		4				
'I'	5			5				-						
'X'	4					4		2					2	
'IM'	3		3	3				1		1	1			
'IX'	1			1		1		-						
'MX'	8		8			8		1		1			1	
'RM'	11		11		11			-						
'RI'	9			9	9			1			1	1		
'RIM'	15		15	15	15			1		1	1	1		
'RIX'	8			8	8	8		-						
'RIXX'	1			1	1	2*		-						
'RMX'	5		5		5	5		1		1		1	1	
'RIXX'	-							1		1		1	2*	
'RIMX'	3		3	3	3	3		-						
'RP'	1				1		1	-						
Total	152	41	82	45	53	31	1	20	8	9	3	4	6	-

Table 72B.

6.25 (cont)

The Emotional State and Attitude of Students with an elevated diastolic pressure.

	Males							Females						
	Blood pressure normal/80 or more							Blood pressure normal/75 or more						
		Classification							Classification					
Assessment	Number	N	M	I	R	X	P	Number	N	M	I	R	X	P
'N'	27	27						18	18					
'M'	13		13					5		5				
'I'	6			6				3			3			
'X'	3					3		-						
'IM'	-							1		1	1			
'IX'	2			2		2		-						
'MX'	-							1		1			1	
'RM'	4		4		4			1		1		1		
'RI'	2			2	2			-						
'RIM'	8		8	8	8			3		3	3	3		
'RIXX'	1			1	1	2*		-						
'RMX'	-							2		2		2	2	
'RIMX'	1		1	1	1	1		-						
'RMXX'	-							1		1		1	2*	
'RP'	1				1		1							
	68	27	26	20	17	8	1	35	18	14	7	7	5	-

Table 72C.

Discussion.

These data are compared with the findings in the whole sample in Fig. 12 and Table 73 and Figs. 13.

6.25 (cont)

Elevated blood pressure groups and Number and % of students with emotional state and attitudes.

		Number and %		
	Total Sample	BP 140/80+	140+/normal	Normal/80+
Males				
Total sample	1,128	82	152	68
'Normal'				
'N'	474 (42.0%)	13 (15.9%)	41 (26.9%)	27 (39.4%)
'M'	402 (35.6%)	45 (54.9%)	82 (54.0%)	26 (38.2%)
'I'	255 (22.7%)	28 (34.1%)	45 (29.5%)	20 (29.4%)
'R'	256 (22.7%)	35 (42.7%)	53 (34.9%)	17 (23.5%)
'X'	233 (20.4%)	25 (30.5%)	31 (20.4%)	8 (11.7%)
'P'	4 (0.5%)	-	1 (0.6%)	1 (1.4%)
Females				
Total sample	372	21	20	35
'Normal'				
'N'	200 (53.8%)	6 (28.6%)	8 (40.0%)	18 (51.4%)
'M'	113 (30.4%)	11 (52.4%)	9 (45.0%)	14 (40.0%)
'I'	68 (18.3%)	8 (38.1%)	3 (15.0%)	7 (20.0%)
'R'	65 (17.5%)	11 (52.4%)	4 (20.0%)	7 (20.0%)
'X'	68 (18.3%)	6 (28.6%)	6 (30.0%)	5 (14.3%)
'P'	2 (0.5%)	-	-	-

Table 73.

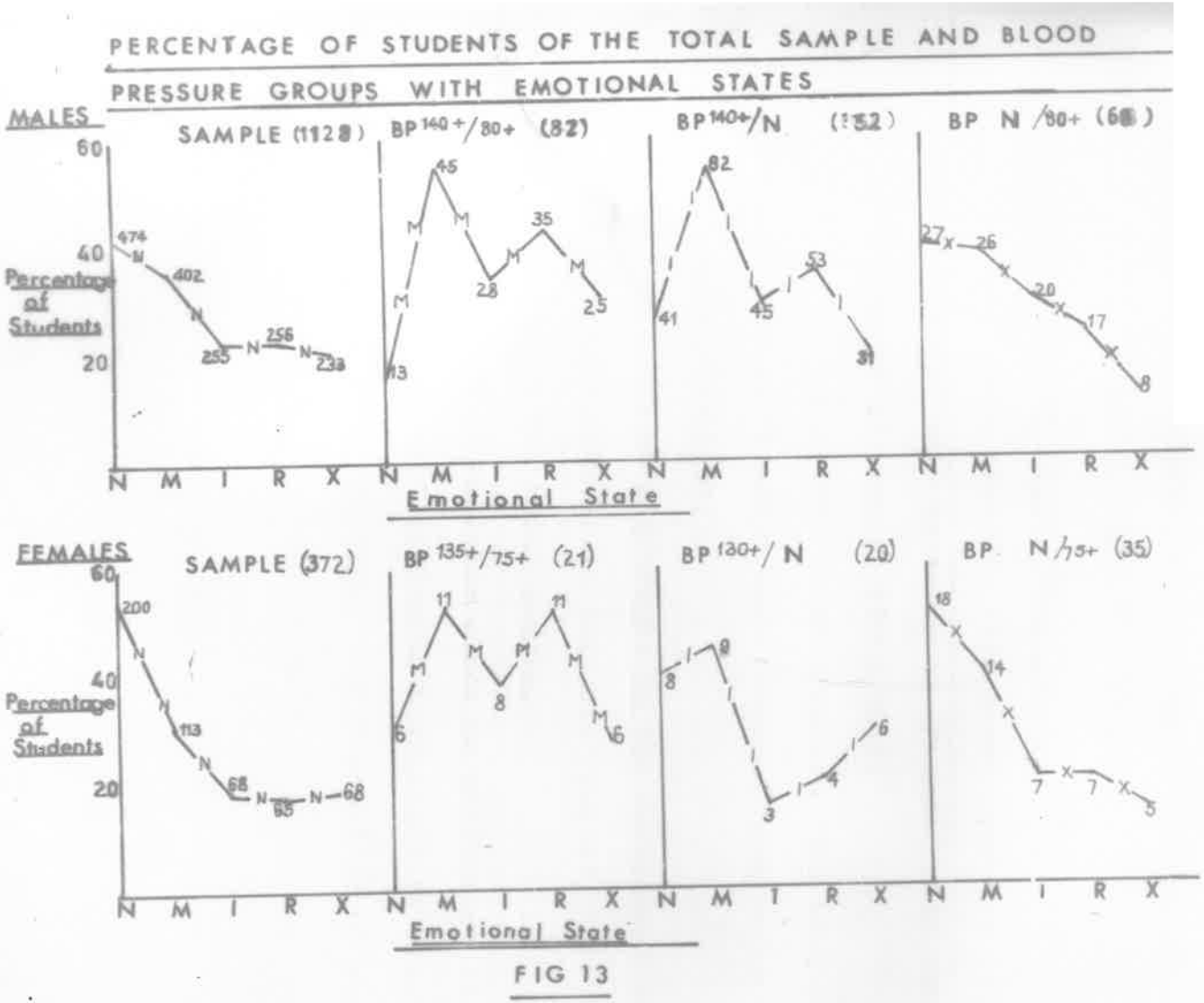

PERCENTAGE OF STUDENTS OF THE TOTAL SAMPLE AND BLOOD PRESSURE GROUPS WITH EMOTIONAL STATES
MALES
SAMPLE (1128)
BP 140+/80+ (82)
BP 140+/N (152)
BP N /80+ (68)
Percentage of Students
60
40
20
474
402
255
256
238
45
35
28
25
13
82
53
45
41
31
27
26
20
17
8
N M I R X
Emotional State
FEMALES
SAMPLE (372)
BP 135+/75+ (21)
BP 130+/ N (20)
BP N/75+ (35)
200
113
68
65
68
11
11
8
6
6
9
8
3
4
6
18
14
7
7
5
N M I R X
Emotional State

FIG 13

6.25 (cont)

Analysis of the pattern of the emotional state in the total sample and the blood pressure groupings.

'Normal' assessment of emotional state. (Fig. 14A)

Fewer male students with blood pressure of '140 or more/80 or more' were assessed as 'normal' when compared with males in the total sample ($P < 0.001$).

Fewer males with blood pressure '140 or more/normal' were assessed as 'normal' when compared with males in the total sample ($P < 0.001$).

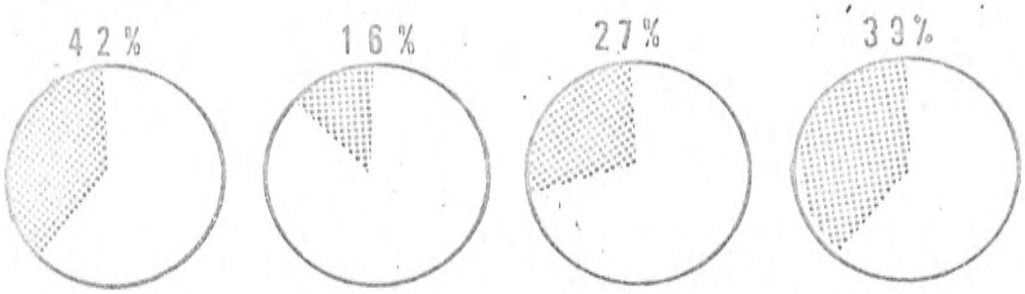
There was no difference in the assessment as 'normal' in male students with blood pressure 'normal/80 or more' and male students in the total sample.

Statistical analysis shows no difference in the assessment as 'normal' of female students with blood pressure '135/75', '135 or more/normal' and 'normal/75 or more', and female students in the total sample.

BLOOD PRESSURE AND EMOTIONAL ASSESSMENT

'NORMAL'

MALES



FEMALES

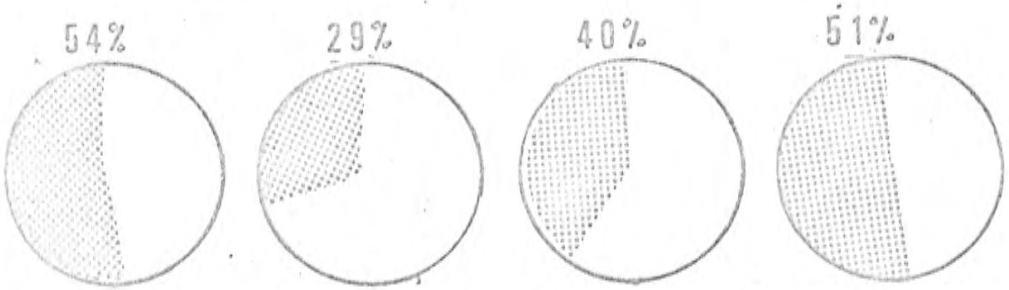


FIG 14A

6.25 (cont)

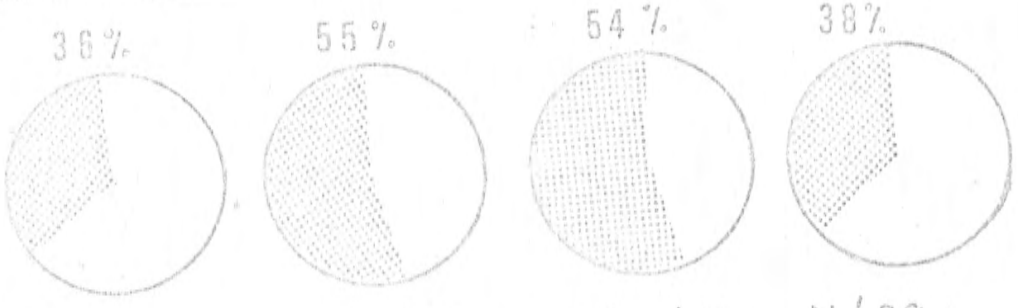
'Conflict of Dependence and Independence' (Fig. 14B)

More males with blood pressures of '140 or more/80 or more' and '140 or more/normal' were assessed with the conflict of 'dependence and independence' when compared with males in the total sample. (BP 140 or more/80 or more - $P < 0.001$, and BP 140 or more/normal - $P < 0.001$). Male students with the blood pressure 'normal/80 or more' and male students in the total sample show no difference in the incidence of assessment 'conflict of dependence and independence'.

More females with blood pressures '135 or more/75 or more' were assessed with the conflict of 'dependence and independence' when compared with females of the total study. Analysis shows that the other blood pressure groups and the total sample of female students had the same incidence of this assessment.

CONFLICT – DEPENDENCE

MALES



FEMALES

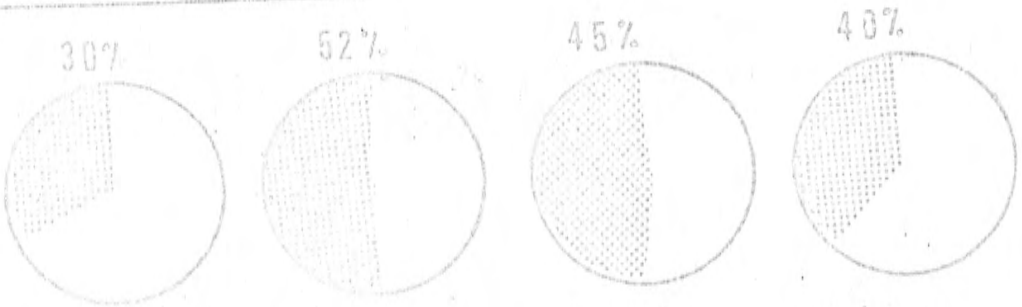


FIG 14B

6.25 (cont)

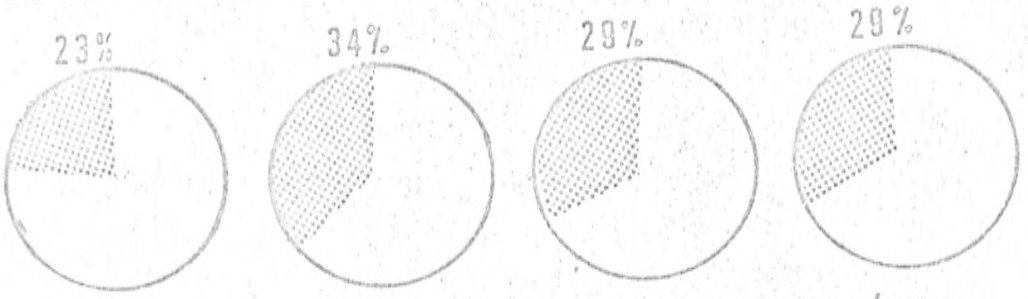
'Conflict of Vocational Identity' (Fig. 14C)

More males with blood pressures of '140 or more/80 or more' were assessed with the conflict of 'vocational identity' when compared with the total sample, but males with the blood pressures '140 or more/normal' and 'normal/80 or more' had the same incidence of this 'conflict' as males in the total sample.

More females with blood pressure of '135 or more/75 or more' were assessed with the conflict of 'vocational identity' when compared with the total sample ($0.05 > P > 0.02$). Otherwise the incidence of assessment of the conflict of 'vocational identity' was the same in the other blood pressure groups and in the total sample.

CONFLICT – VOCATION

MALES



FEMALES

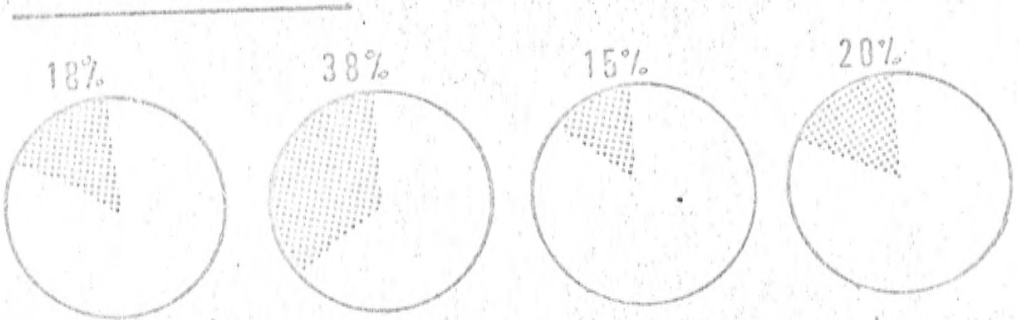


FIG 14C

6.25 (cont)

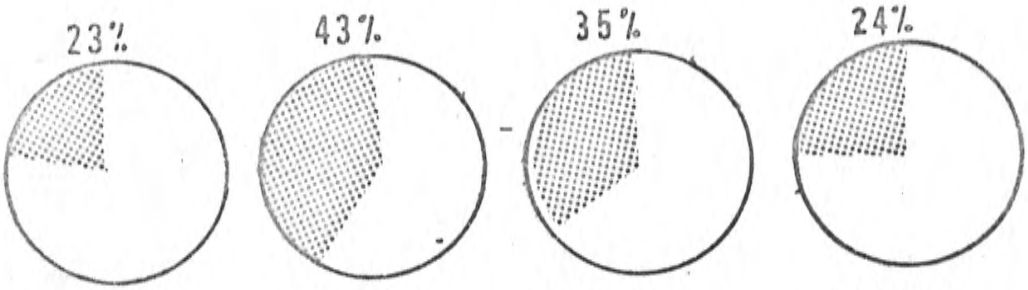
'Conflict of group participation' (Fig. 14D)

More male students with blood pressures of '140 or more/80 or more', and '140 or more/normal' were assessed with the 'conflict of group participation' when compared with males in the total sample. (BP 140 or more/80 or more - $P<0.001$, BP 140 or more/normal - $0.01>P>0.001$). There was no difference in the assessment of this 'conflict' in male students with blood pressure 'normal/80 or more' and male students in the total sample.

More female students with blood pressure of '135 or more/75 or more' were assessed with the 'conflict of group participation' when compared with females in the total sample ($P<0.001$). Otherwise the incidence of assessment of this 'conflict' was the same in the other blood pressure groups and in the total sample.

CONFLICT–GROUP PARTICIPATION

MALES



FEMALES

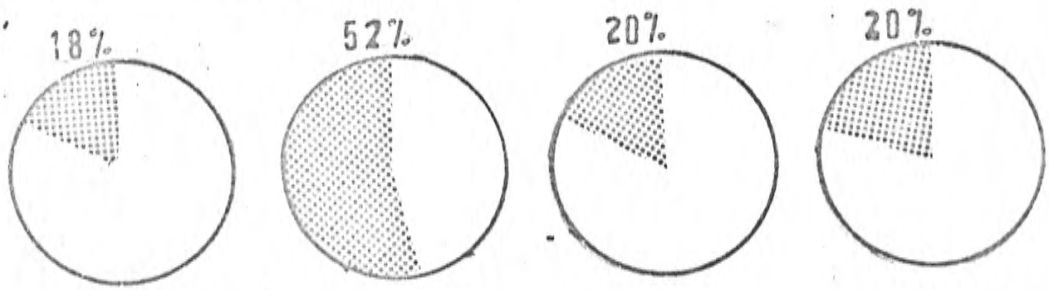


FIG 14 D

6.25 (cont)

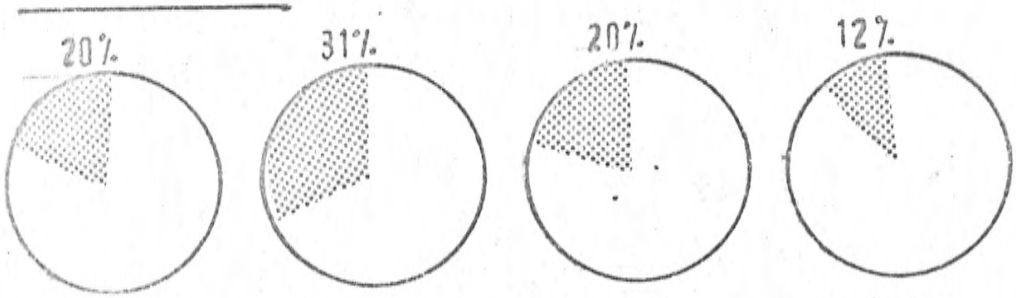
'Problems of an exogenous type' (Fig. 14E)

There was no difference in the assessment of 'problems of an exogenous type' in male students in the total sample and in such students with the blood pressures '140 or more/normal' and 'normal/80 or more'. However more male students had this problem when their blood pressure was '140 or more/80 or more' if analysis is made with male students in the total sample ($0.02 > P > 0.01$).

There was no difference in the assessment of 'problems of an exogenous type' in female students with all blood pressure groups considered and female students in the total sample.

EXOGENOUS PROBLEM

MALES



FEMALES

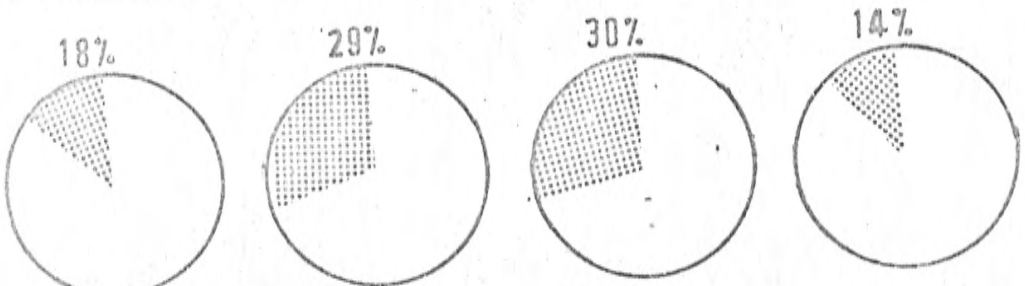


FIG 14E

6.25 (cont)

Hetzel (52) stated in 1959 that 'there is much evidence of the importance of emotional provocation in the precipitation of disease conditions' when he discussed psychosomatic disease. Hetzel continued - 'we have to consider the following three factors in accounting for disease states, namely -

i. Genetic Factors.

ii. A specific psychodynamic background arising from childhood experiences.

iii. A current life stressful situation.'

In the context of this Study, the 'specific psychodynamic background' would concern the 'conflicts' defined in this Study, and the 'current stressful life situation' would concern the 'problems of an exogenous type'.

The results of the comparison of the assessment of the emotional state of students and the blood pressure groups suggests that -

A. Specific psychodynamic factors have a relationship to an elevated blood pressure in males in the following manner -

BP 140 or more/80 or more - 'conflict of dependence and independence'

- 'conflict of vocational identity'

6.25 (cont)

- 'conflict of group participation'.

BP 140 or more/normal - 'conflict of dependence and independence'

- 'conflict of group participation'.

BP normal/80 or more - No significant increase in conflicts.

Specific psychodynamic factors have a relationship to an elevated blood pressure in females in the following manner -

BP 135 or more/75 or more - 'conflict of dependence and independence'

- 'conflict of vocational identity'

- 'conflict of group participation'

BP 135 or more/normal - no significant increase in conflicts.

BP normal/75 or more - no significant increase in conflicts.

B. Current life stressful situations have a relationship in males but not in females, and then only males with a blood pressure 140 or more/80 or more.

6.25 (cont)

Grace and Graham (53) found after interviewing hypertensive patients that 'arterial hypertension occurred when an individual felt that he must be constantly prepared to meet all possible threats'. In the male students of this Study, the 'threats' appear to come from both the 'developmental conflicts' and 'the problems of the current stressful life situation', when those with blood pressure of '140 or more/ 80 or more' are considered. There is a difference in the female students with elevated systolic and diastolic pressure, where the threats appear to come from the 'developmental conflicts' rather than the 'current stressful life situations'.

The findings suggest that elevation of the systolic pressure alone in males appears to be associated with conflicts of 'dependence and independence' and 'of group participation'. Elevation of the systolic pressure only in females appears to have relationship to neither 'developmental conflicts' nor 'the current stressful life situation'.

Harris, Sokolow, Carpenter, Freedman and Hunt (51) investigated 40 College students. They accepted the observation of Hines (49) that an elevated blood pressure in young adult life, even though transient, has a prognostic significance for later development of hypertension of a blood pressure 160/ 100. Harris et Alia submitted the 40 College students to a situation involving a psycho-drama, and then interviewed

6.25 (cont)

the students at separate times with two observers. The students, showing hypertension, used adjectives to describe the drama which seem to be related to the 'conflicts' and 'problems' of this survey. The students showing normal blood pressure used adjectives which seem to be more appropriate to the 'normal' students.

A similar situation was noted in the results and adjectives used when students made a self appraisal of their reaction to the psychodrama.

The findings of this Study are consistent with the findings of Harris et Alia.

When the findings of students with elevated blood pressure are related to assessment of the emotional state, it is suggested that discussion of these conflicts and problems will assist students in their adjustment and with a reduction of the elevated blood pressure. Following on the suggestions of Hines (49) and Harris et Alia (51) the possibility of later hypertensive disease might be reduced.

Summary - Students with elevated blood pressure and the relationship to assessed emotional states and attitudes.

It was found that only 15.9% of male students with elevated systolic and diastolic pressures were assessed as 'normal', while 42.0% of students in the total sample were so

6.25 (cont)

assessed. A similar situation appeared with female students where only 28.6% of those with elevated systolic and diastolic pressures were 'normal', compared with 53.8% in the total sample.

It appears that 'developmental conflicts' have some relationship to the elevated systolic and diastolic pressures in male and female students, whereas 'problems of an exogenous nature' seem to be more significant in males than in female students.

Where systolic pressure only is elevated, neither the 'developmental conflicts' nor 'the exogenous problems' appear to be significant in female students, but male students appear to show an association with the conflicts of 'dependence and independence' and 'group participation'.

Diastolic blood pressure elevation only appears not to be related to 'conflicts' or 'problems'.

In the light of findings of Hines, and Harris et Alia, it has been suggested that elevated blood pressure and potential hypertension in later life might be reduced by assisting these students to adjust to their 'developmental conflicts' and the 'problems of the stressful life situation or exogenous problem'.

6.26. The Emotional State and Attitudes of Students with a Pulse Rate elevation of 90 or more.

Results.

Pulse of 90 or more and Emotional state and attitudes.

Assessment	Number of Males	Males Emotional assessment						Number of Females	Females Emotional assessment					
		N	M	I	R	X	P		N	M	I	R	X	P
'N'	12	12						16	16					
'M'	35		35					11		11				
'I'	3			3				3			3			
'X'	7					7		3					3	
'IM'	3		3	3				1		1	1			
'IX'	-							1			1		1	
'MX'	-							1		1			1	
'R'	12		12		12			6		6		6		
'RI'	2			2	2			2			2	2		
'RIM'	20		20	20	20			8		8	8	8		
'RIX'	8			8	8	8		-						
'RMX'	9		9		9	9		3		3		3	3	
'RIMX'	5		5	5	5	5		2		2	2	2	2	
'RP'	1				1		1	1				1		1
Total	117	12	84	41	57	29	1	58	16	32	17	22	10	1

Table 74.

Discussion.

'Normal' assessment of emotional state - pulse 90 or more (Fig. 15A)

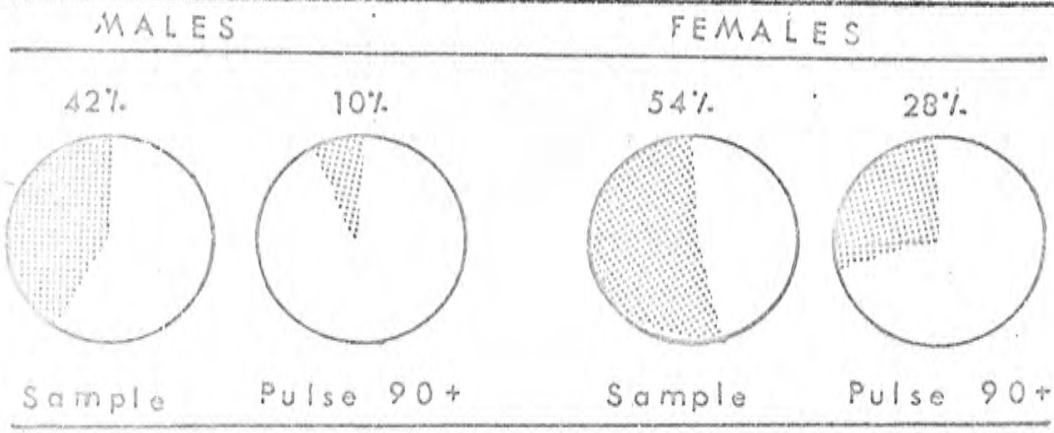


FIG 15A

6.26 (cont)

Male and female students with a pulse of 90 or more are less likely to be assessed with 'normal' emotional state, as indicated by comparison with the appropriate parts of Tables 68A. and 68B. and Table 75 (Males - $P < 0.001$, Females - $0.01 > P > 0.001$)

'Conflict of Dependence and Independence' - pulse 90 or more.

(Fig. 15B)

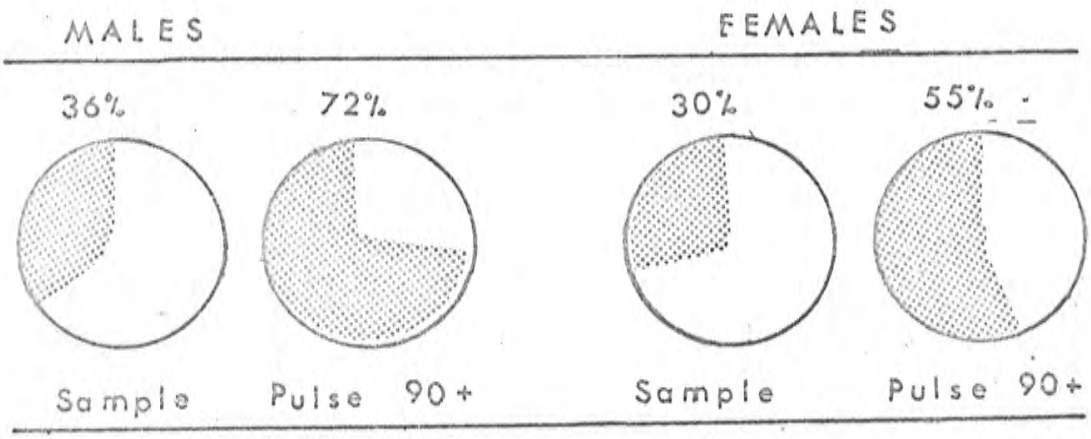


FIG 15B

Male and female students with a pulse of 90 or more appear to show an increase in the 'conflict of dependence and independence' (Males - $P < 0.001$, Females - $P < 0.001$).

6.26 (cont)

'Conflict of vocational identity' - pulse 90 or more. (Fig. 15C)

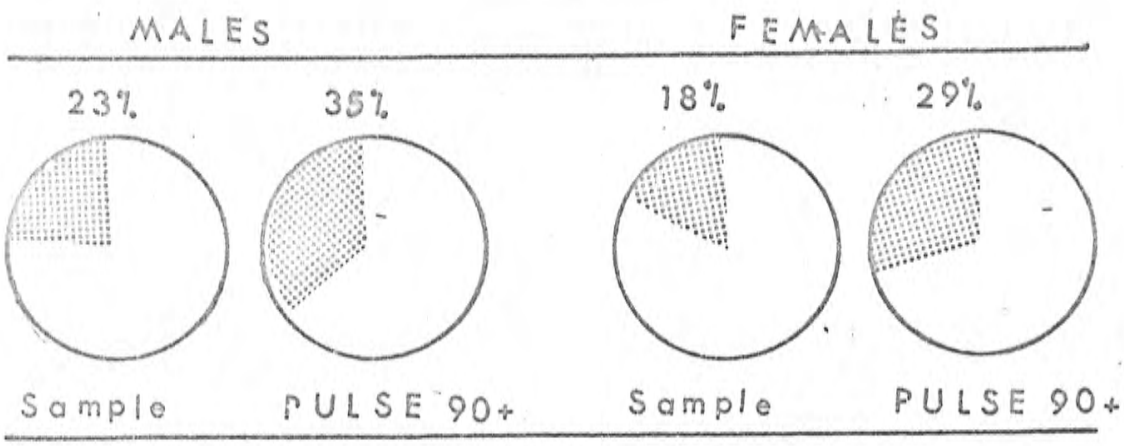


FIG 15C

Analysis shows that males with a pulse of 90 or more seem to show an increase of 'conflict of vocational identity' ($0.01 > P > 0.001$). However, females with this pulse increase appear to show no variation from the assessment of this conflict in female students of the total sample.

2.26 (cont)

'Conflict of group participation' - pulse 90 or more (Fig. 15D)

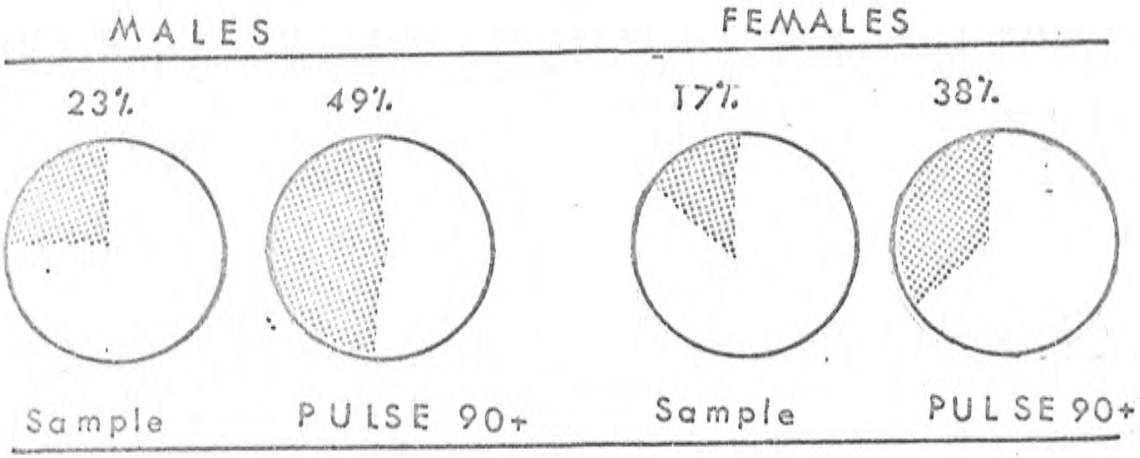


FIG 15D

Male and female students with a pulse of 90 or more appear to show an increase in the 'conflict of group participation'. Males - $P < 0.001$, Females - $0.01 > P > 0.001$).

.26 (cont)

Problems of an exogenous type' - pulse 90 or more (Fig.15E)

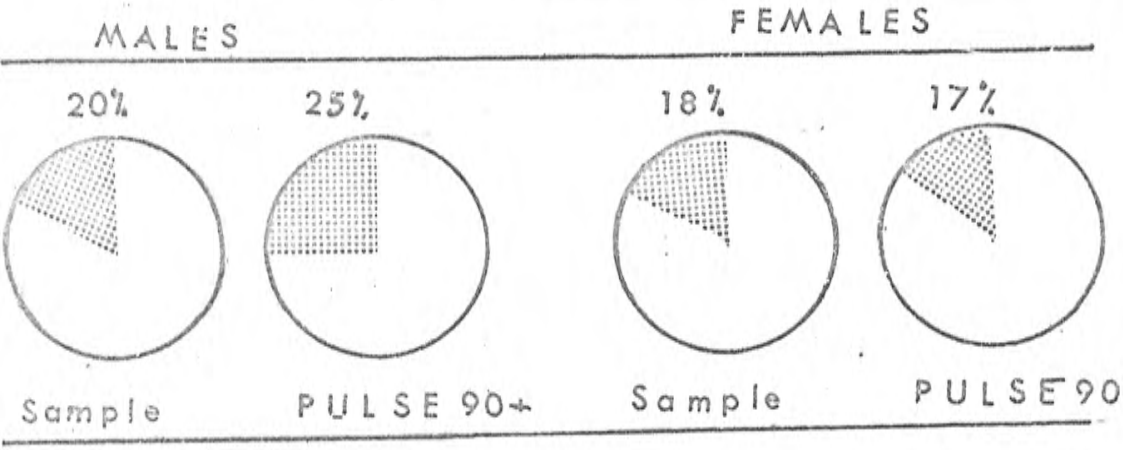


FIG 15E

Analysis suggests that males and females with a pulse of 90 or more and with exogenous problems show no variation from the whole Study pattern.

These findings suggest that an increase of pulse of 90 or more in males and females is associated with 'developmental conflicts' rather than the 'current stressful life

6.36 (cont)

situations'. These male students show that an increased pulse to 90 or more is associated with the conflicts of 'dependence and independence', 'vocational identity' and 'group participation', while females show an increased pulse to 90 or more with the two conflicts - 'dependence and independence' and 'group participation'.

Summary - Emotional state and pulse increase to 90 or more.

Students with a pulse of 90 or more have been assessed and compared with students in the whole sample.

These findings indicate that an increased pulse in males and females is associated with 'developmental conflicts' rather than the 'current stressful life situation'. Female students do not show this pulse elevation when 'conflict of vocational identity' is considered.

6.27. Assessment of Emotional State and Attitudes in Students with Asthma.

Introduction.

Students whose asthma is still active or has been relieved are considered. 78 students have been found to suffer from asthma at some time.

The assessment of emotional state and attitudes of these students are shown in Table 75.

Results.

Students with asthma - their assessed emotional state and attitudes.

Assessment	Number of Students.	Number in Classification N	M	I	R	X	P
'N'	37	37					
'M'	13		13				
'I'	3			3			
'X'	4					4	
'IM'	1		1	1			
'IX'	2			2		2	
'RM'	3		3		3		
'RI'	2			2	2		
'RX'	1				1	1	
'RIM'	4		4	4	4		
'RIX'	3			3	3	3	
'RMX'	4		4		4	4	
'RIMX'	1		1	1	1	1	
Total	78	37	26	16	18	15	-

Table 75.

Discussion.

Statistical analysis of the combined Tables 68A. and 68B. with Table 75 shows the following observed and expected

6.27 (cont)

number of students.

	Assessed Emotional state				
	N	M	I	R	X
Observed - Table 75	37	26	16	18	15
Expected - Tables 68A. and 68B.	35	27	17	17	16

Table 76.

Table 76 suggests that the assessment of the emotional state and attitudes of students with the history of asthma shows no significant difference from the pattern of the whole study.

Hetzel (52) states that 'there is much evidence of the importance of emotional provocation in the precipitation of disease conditions such as peptic ulcer, ulcerative colitis, bronchitis, asthma and hyperthyroidism'.

Davidson (54) indicates three factors which have an influence on the state of asthma, namely -

'Predisposing and constitutional factors.

Exciting factors - psychological disturbances.

- allergy.'

Davidson continues 'a cause of asthma - anxiety, worry, protracted nervous and emotional strain - seems to be important in promoting the first attack and in perpetuating the condition'

These unexpected findings of normal assessment of the emotional state and attitudes of students with the history of

6.27 (cont)

asthma require more intensive investigation on an enlarged sample of students who suffer from asthma in a future study. This investigation should consider possible differences of emotional state and attitudes of those currently suffering from asthma and of those with a past history of asthma.

Summary - Assessment of the Emotional state and attitudes of Students with asthma.

Assessment of the emotional state and attitudes of students with past or present asthma appears not to differ from the pattern of the students in the whole sample.

This finding does not correspond with those of previous workers. The opinions of Hetzel and Davidson have been considered, and their opinions do not agree with the findings of this study. Therefore a suggestion has been made that a further study on an enlarged sample of students be made.

6.28. The assessment of the Emotional state and attitudes of Female students with pain at menstruation.

Results.

Emotional state and attitudes - Females with painful menstruation.

Assessment	Number of females	Number in classification N	M	I	R	X	P
'N'	80	80					
'M'	26		26				
'I'	7			7			
'X'	13					13	
'MX'	10		10			10	
'IM'	3		3			3	
'RM'	7		7		7		
'RI'	5			5	5		
'RX'	1				1	1	
'RIM'	8		8	8	8		
'RIX'	4			4	4	4	
'RMX'	6		6		6	6	
'RIMX'	3		3	3	3	3	
Total	173	80	63	30	34	37	-

Table 77.

Discussion.

Statistical analysis of Table 77 with Table 68B. suggests no difference in the results of the assessment of the emotional state and attitudes of female students with painful menstruation from the results of a similar assessment of the 372 female students in the whole sample.

Kroger and Freed (55) in 1951 discussed the psychosomatic aspect of functional 'dysmenorrhoea' which they stated 'is a symptom of a personality disorder'. They pointed out 'the General Practitioner or Gynaecologist may be

6.28 (cont)

slightly confused by these patients if he expects to find surface evidence of emotional problems'.

Whittkower and Wilson (56) studied 57 unselected patients with dysmenorrhoea. They found 'these women as children showed emotional maladjustment 4 times as often as the control group. They could be classified into two main personality types. The first were characterised by deep resentment of their female role, the second were immature physically and rather shy or shut in, or chronically anxious and complaintive'.

It might be suggested from these writing that the conflict of 'sexual identity' has some relationship to painful menstruation, but this conflict has not been considered in this context.

6.29. The assessment of the Emotional state and attitudes of students classified with 'Bad Posture'.

These students with bad posture were discussed in Chapter 5, part 5.101.

The assessment of the emotional state and attitudes is shown in Table 78.

Results.

Assessment	Number of males	Number in classification						Number of females	Number in classification					
		N	M	I	R	X	P		N	M	I	R	X	P
'N'	2	2						2	2					
'M'	-							2		2				
'RM'	4		4		4			-						
'RI'	1			1	1			-						
'RIM'	12		12	12	12			8		8	8	8		
'RIX'	-							1			1	1	1	
'RMX'	1		1		1	1		3		3		3	3	
'RIMX'	1		1	1	1	1		2		2	2	2	2	
'RP'	1				1		1	1				1		1
Total	22	2	18	14	20	2	1	19	2	15	11	15	6	1

Table 78.

Discussion.

Analysis of Tables 68A. and 68B. with the respective sections of Table 78 suggest that -

a. Male and female students with 'bad posture' show fewer number of 'normal' students (Males - $P < 0.001$, Females - $P < 0.001$).

b. More male and female students with 'bad posture' demonstrate 'developmental conflicts' of the types

6.29 (cont)

'dependence and independence' (Males - $P < 0.001$, Females - $P < 0.001$), 'vocational identity', (Males - $P < 0.001$, Females - $P < 0.001$), and 'group participation' (Males - $P < 0.001$, Females - $P < 0.001$).

c. Male and female students with 'bad posture' show no variation from the total sample, when exogenous problems are considered.

Summary - Assessment of the Emotional state and attitudes of students with bad posture.

Male and female students with 'bad posture' seem to have an increased tendency to 'developmental conflicts'.

6.30. The assessment of the Emotional state and attitudes of students with acne.

Introduction.

In Chapter 5, Part 5.110, it has been shown that 311 students had acne.

The assessment of the Emotional state and attitudes is shown in Table 79.

Results.

Assessment	Number with acne	Number in classification N	M	I	R	X	P
'N'	132	132					
'M'	53		53				
'I'	14			14			
'X'	14					14	
'IM'	5		5	5			
'MX'	7		7			7	
'RM'	19		19		19		
'RI'	10			10	10		
'RIM'	30		30	30	30		
'RIX'	9			9	9	9	
'RMX'	10		10		10	10	
'RIMX'	5		5	5	5	5	
'RP'	3				3		3
Total	311	132	129	73	86	45	3

Table 79.

Discussion.

Analysis of the combined Tables 68A. and 68B. with Table 79 suggests that -

The Students with acne show an increase in the 'conflict of dependence and independence' and the 'problem of an exogenous type'. ('M' - X^2 - 4.523. $0.05 > P > 0.02$. 'X' - X^2 - 4.660. $0.05 > P > 0.02$).

6.30 (cont)

Students with acne show no significant variation when 'the conflict of group participation' is considered. However, as this 'conflict' shows a variation which is close to significant (X^2 - 3.821. $0.10 > P > 0.05$), there may be a tendency for students with 'acne' to have such a 'conflict'.

'Conflict of vocational identity' seems to have no relationship to an increased incidence of acne in students.

Wolff, Lorenz, and Graham (57) submitted their subjects to emotional stress, after finding a method of measuring the amount of sebum excreted. They showed that 'when the acne patient was subjected to stress during which anger was induced in association with a particular type of attitude, there was an increased output of facial sebum (2-5 fold)'.

Further they suggested that 'in these patients the outstanding emotional pattern was a phasic one in which there were episodes of intense anger promptly followed by more prolonged periods of remorse.' Furthermore, 'this characteristic affective reaction occurred commonly, when the patients found themselves in conflict with some figure of authority, usually the parent'.

The findings in this Study appears to confirm the findings of Wolff et Alia. 'Conflict of dependence and

6.30 (cont)

independence' would indicate that the student is in conflict with parents. 'Problems of an exogenous type' would be likely to be associated with anger and remorse.

Summary - The assessment of the emotional state and attitudes of students with acne.

The assessment of the emotional state and attitudes of students with acne have been considered.

It appears that the 'conflict of dependence and independence' and 'problems of an exogenous type' have an association with the incidence of acne in students.

There is a suggestion that 'conflict of group participation' may have an association with acne.

The findings are consistent with the results of previous studies by Wolff et Alia.

Summary - Chapter 6.

The assessment of the Emotional state and attitudes of the Students in this sample.

This assessment was made at the introductory interview before the medical examination.

More females (53.8%) than males (42.0%) were assessed as 'normal'. The incidence of 'developmental conflicts' and 'exogenous problems' has been shown by analysis to be the same in male and female students.

Emotional difficulties in students have been discussed, and the manner in which members of the 'welfare team' can assist students to overcome these difficulties has been shown.

6.20. Assessment of the Emotional state and attitudes in relation to -

6.21. Smoking.

Male students with the 'conflict of vocational identity' show an increased tendency to smoke.

6.22. Alcohol.

Male students who take alcohol show a decreased incidence of the 'conflict of group participation'.

6.23. Student taking no exercise during the University year.

It has been found that students who take no exercise are less likely to be assessed as 'normal'.

Summary (cont)

Male students who take no exercise appear to show a higher incidence of conflicts of 'dependence and independence', 'vocational identity' and 'group participation', whereas female students of this grouping show a higher incidence of conflicts of 'dependence and independence' and 'group participation' and 'problems of an exogenous type'.

6.24. Relaxation..

The emotional state and attitudes of students who relax by reading and watching television is the same as students in the whole sample.

6.25. Blood Pressure.

It has been found that 15.9% of males with elevated systolic and diastolic pressure were assessed as 'normal', while 42.0% of students in the total sample were so assessed. A similar finding is noted in female students where those with elevated systolic and diastolic pressure showed an assessment of 28.6% 'normal' and those in the total sample 53.8% 'normal'.

The findings suggest that 'developmental conflicts' are associated with the elevation of systolic and diastolic pressure in male and female students, whereas 'problems of an exogenous nature appear to be more significant in male than in female students.

Where the systolic blood pressure only is elevated,

Summary (cont)

neither the 'developmental conflicts' nor the 'exogenous problems' appear to be significant in female students, but male students with systolic blood pressure elevation show an association with the conflicts of 'dependence and independence' and 'group participation'.

Diastolic blood pressure elevation appears to have no relation to 'developmental conflicts' or 'exogenous problems'. In the light of the findings of Hines, and Harris et Alia, is has been suggested that elevated blood pressure in this age group and potential hypertension in later life might be reduced by assisting these students to adjust to their 'developmental conflicts' and 'current problems'.

6.26. Pulse rate 90 or more.

An increased pulse in males and females has been found to be associated with the 'developmental conflicts' rather than the 'current stressful life situation'. Female students do not show this pulse elevation when 'conflict of vocational identity' is considered.

6.27. Asthma.

The assessment of the emotional state and attitudes of students with past or present asthma appears not to differ from the pattern of the students in the whole sample.

6.28. Painful menstruation of female students.

Female students who have painful menstruation show

Summary (cont)

no difference in emotional state and attitudes compared with the whole female sample.

6.29. Bad Posture.

Male and female students with 'bad posture' seem to have an increased tendency to 'developmental conflicts'.

6.30. Acne.

It appears that the 'conflict of dependence and independence' and 'problems of an exogenous type' have an association with the incidence of acne in students.

Conclusions.

With the increasing concern of Student Health with morbidity from minor emotional illness, it has become necessary to find a method of detecting emotional problems in students before illness and a deterioration of Academic performance is apparent. By detecting such potential ill-health in students, measures of prevention might be applied by the student health medical officers.

A definition of the concepts and methods used in this Study has been shown so that measures of detection of these difficulties may be made and measures of prevention may be applied. It has been shown that an assessment of the emotional state and attitudes can be made at the time of the 'routine medical examination'. By this means, minor emotional difficulties may be found, and by discussion with the student, insight into his or

Summary (cont)

her difficulties may be given to such students.

This Chapter has shown the relation of the emotional state and attitudes to various environmental factors and aspects of physical health.

CHAPTER 7.

7.00. PROPHYLACTIC PROCEDURES.

7.10. Chest Xrays

7.20. Mantoux Test.

7.30. Vaccination against Small-pox.

7.40. Immunization against Diphtheria.

7.50. Immunization against Whooping cough.

7.60. Prophylaxis against Poliomyelitis.

7.70. Tetanus Immunization.

CHAPTER 7.

7.00. PROPHYLACTIC PROCEDURES.

Introduction.

When the physical health of students is considered, pulmonary tuberculosis remains a potential hazard. Students are in the vulnerable age group for this disease, especially at times of stress such as the pre-examination and examination periods. At such times sleep is reduced, eating habits are irregular, and exercise is reduced or not taken at all. At such times students sit for long periods in tutorials, libraries or examinations with relatively close contact with other students. One active undetected case of pulmonary tuberculosis could leave a trail of new cases of the disease at such times, if any relaxation of the measures of detection and of prevention were made.

First year full-time students are obliged to submit to Mantoux testing and Chest Xray, while first year part-time students are required to produce evidence of a satisfactory Chest Xray. All Ancillary staff have a Chest Xray at the time of the superannuation medical examination which is conducted at the Health Service. All Academic staff members have a Chest Xray at the time of their medical examination for superannuation. Food handlers have regular Chest Xrays. In this manner the possibility of anyone suffering from pulmonary tuberculosis on entering the University is eliminated.

Procedure.

At the time of interview, the history of prophylactic measures which have been received is recorded by the student.

7.00 (cont)

These concern vaccination for small-pox, diphtheria and whooping cough immunizations, poliomyelitis immunization by injection of Salk or by oral Sabine vaccine, tetanus toxoid injections and B.C.G. innoculations.

When it is found that students have not been immunized, the necessary procedures are recommended. Such procedures are given free, if the student wishes the procedure to be completed. This free service is provided by the State Department of Health which supplies these vaccines and innoculations free of charge.

The Sister of the Health Service records all injections which may have been given to students, and, when the student agrees, the particular course is completed.

All medical and dental students are advised to be vaccinated against small-pox before they enter their clinical years. Students who may be travelling overseas are given a vaccination against small-pox, when this is requested, as well as procedures for immunization for typhoid and cholera.

Chest Xrays are conducted at the State Xray unit, a section of the Tuberculosis Services, and this service is free.

7.10. CHEST XRAYS.

No active case of pulmonary tuberculosis was detected in the students in this Study.

Two students gave the history of tuberculosis in childhood, and their chest Xrays indicated a primary healed focus. Another student with no history of tuberculosis showed a healed primary focus on the Xray.

One male student had a chest Xray which was suspicious of bronchiectasis, and this was confirmed by the findings of the medical examination.

Another male student demonstrated an abnormal cardiac shadow, and subsequent investigation proved that he had pulmonary stenosis.

7.20. MANTOUX TESTS.

Old Tuberculin 1/1000 strength which was supplied by the Commonwealth Serum Laboratories was used for all Mantoux tests.

The results of these tests are shown in Table 80.

7.20 (cont)

Results.

		Males	Females
No history of B.C.G.			
Mantoux reaction -	5 mm.	317	113
	10 mm.	80	12
	15 mm.	41	1
	20 mm.	12	1
	25 mm.	3	-
	25+ mm.	3	1
Not given or did not report back		8	1
Negative reactors		97	30
Negative reactors - Refused B.C.G.		21	5
- B.C.G. given		76	25
30 males and 18 females reported back in 3 months for repeat Mantoux -	Negative	2	1
	5 mm.	19	7
	10 mm.	6	6
	15 mm.	2	3
	20 mm.	-	1
History of B.C.G. before entering the University.			
Mantoux reaction -	5 mm.	226	81
	10 mm.	214	79
	15 mm.	86	33
	20 mm.	20	9
	25 mm.	1	1
	25+ mm.	3	-
Did not report		1	2
Negative reactors		16	8
Negative reactors - Refused B.C.G.		5	3
- B.C.G. given		11	5
9 males and 5 females reported back in 3 months for repeat Mantoux -	Negative	1	-
	5 mm.	5	1
	10 mm.	2	4
	15 mm.	1	-

Table 80.

7.20 (cont)

Discussion.

If 5 mm. Mantoux reading is accepted as a positive reactio 40% of males and 34% of females were found to be natural positive reactors.

12.5% of male students had a natural positive reaction of Mantoux test 'over' 5 mm. 74 male students come from South East Asia, and of these 52 had no B.C.G. and showed a Mantoux reaction of over 5 mm. (4.5% of male students).

4.0% of female students had a natural positive reaction of Mantoux reading of over 5 mm. 12 female students come from South East Asia, and 7 of these had no B.C.G. and showed a Mantoux reaction of over 5 mm. (1.9% of female students).

9 students (0.8%) failed to report back for the Mantoux readings. Several students did not report back, as they had no intention of continuing at the University. One of these students was advised not to have a Mantoux test due to the fact that he suffered from a severe form of psoriasis.

48 students did not report back for Mantoux reading after B.C.G. These students did not report for two reasons, namely -

i. Medical students at Flinders University knew that they would be required to report for Mantoux test in their second year of Medicine.

ii. Proximity to examinations.

7.20 (cont)

Summary.

The procedure used in the detection and prevention of pulmonary tuberculosis has been described, and the results of these procedures have been shown.

By the use of these procedures, the Health Service has a basis on which to work, when an active case of pulmonary tuberculosis appears in the University. At any time comparison can be made of the Mantoux test from this basic reading in students. If a contact student shows an increase in the sixe of the Mantoux test, referral is made to either the Tuberculosis Services or the private Physician. The Health Service can obtain from the Computing Centre's records of classes, in which an active case or active Mantoux test was found, and the screening process can be performed in a rapid manner.

If over 5 mm. Mantoux reaction is accepted as a positive reactor, 12.5% of males and 4.0% of females appear as natural positive reactors, and these include 4.5% of male students and 1.9% of female students from South East Asia, who are in the situation of being natural positive reactors.

7.30. VACCINATION AGAINST SMALL-POX.

510 students had submitted to this vaccination. This represents 34% of the students in the Study.

All medical and dental students are advised to have this vaccination before entering clinical years.

7.40. DIPHTHERIA IMMUNIZATION.

The majority of students had received diphtheria immunizations as children. In fact 232 students had indicated that they had not been so immunized (15.5% of students).

Medical students who had not been immunized were tested by the Maloney and Schick Tests. If unimmunized and insensitive to the toxoid, a course of Diphtheria Prophylactic, (purified Toxoid Aluminium Phosphate of the Commonwealth Serum Laboratory) was advised.

7.50. WHOOPING COUGH.

321 students had not been immunized against whooping cough. This represents 21.4% of students.

No injections against whooping cough were given.

7.60. POLIOMYELITIS IMMUNIZATION.

At the time of the medical examinations of this Study, the Health Service used Salk immunization, but the routine has now been altered with the introduction of oral Sabine vaccination. This latter form of immunization has been readily accepted by students, whereas there appeared some hesitation on the part of students when injections were given.

The results of the use of Salk immunization are shown in Table 81.

Results.

Poliomyelitis by the use of Salk.

State of injections	Number given.
Completed before examination	455
4th. injection given	760
3rd. injection given	35
2nd. injection given	6
1st. injection given	93
	1,349
Students not availing themselves of-	
4th. injection	138
3rd. injection	1
2nd. injection	2
1st. injection	10
	151

Table 81.

Discussion.

894 students took advantage of the Salk immunization offered at the Health Service, and 455 students had completed

7.60 (cont)

the course before entering the University.

151 (10%) students refused to have this injection. The reasons given by such students were -

Disinterested.

'I do not like injections'.

Parental objections.

Objections on religious grounds.

Advised not to proceed because of previous illness after the injections.

81% (1,215) students were fully innumized against poliomyelitis.

7.70. TETANUS PROPHYLAXIS.

A screening was applied to students for this immunization in a similar manner to poliomyelitis immunization. The agent used for immunization was Purified Tetanus Toxoid (Aluminium Phosphate absorbed) of the Commonwealth Serum Laboratory. The routine procedure used was - second injection 6 weeks after the first, and third injection 6 months after the second. Where a student had received the full course, but he or she had not had an injection of Tetanus Toxoid for 5 years, the student was offered a 'refresher' injection.

The results of this screening are shown in Table 82.

Results.

Tetanus Prophylaxis.

Completed course + 1 refresher before examination	490
Completed course before examination	134
Refresher given	597
3rd. injection given	18
2nd. injection given	13
1st. injection given	179
Total	1,431
Students who refused opportunity to take the course or complete the course	69

Table 82.

Discussion.

83% of students had a full cover of protection against tetanus. 12% had never received previous immunisation and they commenced the course at the Health Service 4.6% refused

7.70 (cont)

to start or receive further injections.

The reasons for refusal to have any further injections were the same as has been discussed in Poliomyelitis immunization.

Summary - Prophylactic Procedures.

It was apparent that students accepted the various facilities offered for immunization at the Health Service.

Methods of detection and prevention of pulmonary tuberculosis have been described.

10% of students refused poliomyelitis injections, and 4.6% refused tetanus immunization.

CHAPTER 8.

8.00. CASUALTY SERVICE.

8.10. Students reporting for Casualty Service.

8.20. The assessment of the Emotional state and attitudes of students reporting for Casualty Service.

8.30. The assessment of the Emotional state and attitudes of First Year Medical Students reporting for Casualty Service.

CHAPTER 8.

8.00. THE CASUALTY SERVICE.

Introduction and Procedure.

Students who were examined in 1965 and 1966 are discussed in this section, if they returned for Casualty advice subsequently and up to the commencement of the pre-examination vacation in 1967.

The illness and injuries have been divided into four types, namely -

Sport injury.

Accidents.

Sickness of an organic type - Throat infections, upper respiratory tract disease, abdominal pain from menstruation, conjunctivitis, otitis externa as examples.

Sickness of an emotional type - Inability to study, headaches, dyspepsia, skin rashes, insomnia, depression, all of which diseases were related to stress of the University course, stress at Home or Domicile, or difficulty of developmental adjustments.

Later in this Chapter, a test (which would be suggestive only due to the general nature of the four types of Casualty Service and the time factor) will be applied whereby a possible relationship is examined between the Casualty attendances and the assessment of the emotional state and attitudes of students.

8.00 (cont)

It might be suggested that students assessed with abnormal emotional states and attitudes would report at an increased rate with sickness of an emotional type.

It is a general policy of the Health Service that no active treatment is given to students, except in emergency situations. Students with problems and conflicts related to University studies, Asian and other Overseas students, Inter-state and Country students are investigated and then referred to a local medical officer in their neighbourhood. Occasionally such a student may be in serious economic difficulties. Under these circumstances, it would be improper to see such students lacking medical care, and they are treated for simple matters, or, if the condition is serious, they are referred to a Public Hospital. It is not possible to establish a rigid policy as each case must be considered on its merits.

It has been found that students sometimes make an approach to the Health Service for some minor physical reason, while they are seeking advice for some major emotional crisis.

8.10. STUDENTS REPORTING FOR CASUALTY SERVICE.

Results.

Primary consultations - Casualty Service

Type	Male 1965	Male 1966	Male Total	Female 1965	Female 1966	Female Total	Total students
Sport injury	70	39	109	6	2	8	117 (19.3% of Casualties
Accidents	30	32	62	9	18	27	89 (14.7% of Casualties
Illness-organic	117	110	227	26	31	57	284 (46.9% of Casualties
Illness-emotional	47	28	75	28	12	40	115 (19.0% of Casualties
Total	264	209	473	69	63	132	605

Table 83.

Follow-up consultations - Casualty Service

Type	Male 1965	Male 1966	Male Total	Female 1965	Female 1966	Female Total	Total students
Sport injury	46	30	76	1	3	4	80
Accidents	15	10	25	2	2	4	29
Illness-organic	60	36	96	7	8	15	111
Illness-emotional	50	13	63	15	7	22	85
Total	171	89	260	25	20	45	305

Table 84.

Discussion.

40.3% (605) students returned for some type of Casualty service. (41.9% of males and 35.5% of females).

Of such students who sought such advice, 46.9% reported with organic illness 19.0% with emotional illness, 19.3% with

8.10 (cont)

with sport injuries, and 14.7% for accidents occuring in or on the way to the University.

20.3% (305) students returned for 'follow up' consultations. The percentages of the 'follow up' Casualty service were - Organic illness - 36.4%, emotional illness - 27.9%, sport injuries - 26.2%, accidents - 9.5%.

8.20. THE ASSESSMENT OF THE EMOTIONAL STATE AND ATTITUDES OF STUDENTS REPORTING FOR CASUALTY SERVICE.

Introduction and Procedure.

In this section, a test is applied whereby the relationship between the casualty attendances and the assessment of the emotional state and attitudes of students is examined.

The tentative suggestion might be made that students assessed with 'conflicts' and 'problems' would have an increased incidence of illness of an emotional type.

Results.

Comparison of the assessment of the emotional state and attitudes of the students reporting for Casualty Service.

Source and type of illness or injury.	Number of students	Number in classification N	M	I	R	X	P
Study (Tables 68A and 68B)	1,500	674	515	323	321	301	8
Sport injury (Table 83)	117	76	28	14	9	15	-
Accidents (Table 83)	89	29	40	18	16	22	-
Illness (organic) (Table 83)	284	152	78	51	62	65	-
Illness (emotional)	115	16	59	50	66	42	3

Table 85.

Discussion.

The percentage of 'normal' students, male and female, in this sample, and in the various types of casualty attendances is shown in Fig. 16.

8.20 (cont)

'Normal' students reporting for Casualty Service (Fig. 16).

Analysis of Table 85 and the combined Tables of 68A. and 68B. would suggest that -

Students reporting with a sport injury include a higher incidence of 'normal' students than in the whole sample ($P < 0.001$).

Students reporting with accidents and organic illness have the same incidence of 'conflicts' and 'problems' as that found in the total sample, but students with emotional illness have a higher incidence of 'conflicts' and 'problems' than found in the whole sample ($P < 0.001$).

Students assessed with 'Conflict of Dependence and Independence' reporting for Casualty Service (Fig. 16).

Analysis suggests that more students with this 'conflict of dependence and independence' report at the Casualty service for treatment of an emotional illness ($P < 0.001$).

Students assessed with 'Conflict of vocational identity' reporting for Casualty Service (Fig. 16).

Analysis suggests that fewer students with this 'conflict of vocational identity' report with sport injuries ($0.05 > P > 0.02$), but it has been found that more students with this 'conflict' report at the Casualty service for emotional illness ($P < 0.001$).

8.20 (cont)

Students assessed with 'Conflict of group participation' reporting for Casualty Service (Fig. 16).

Analysis suggests that fewer students with this 'conflict of group participation' report with sport injuries ($P < 0.001$).

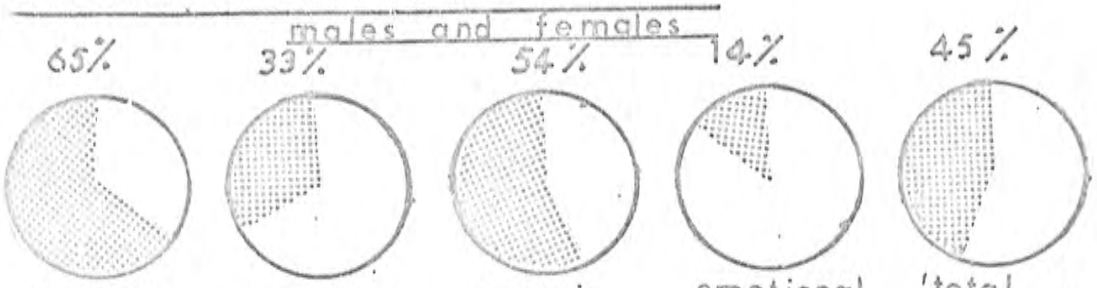
More students with this 'conflict' report at the Casualty service for treatment of emotional illness ($P < 0.001$).

Students assessed with 'Problems of an exogenous type' reporting for Casualty Service (Fig. 16).

More students with this 'problem of exogenous type' report at the Casualty service for treatment of emotional illness ($P < 0.001$).

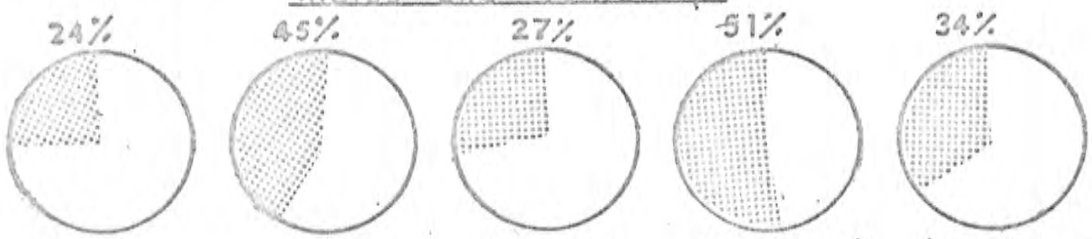
EMOTIONAL STATE – STUDENTS REPORTING FOR CASUALTY SERVICE – 'NORMAL'.

males and females



- 'CONFLICT OF DEPENDENCE AND INDEPENDENCE'.

males and females



'CONFLICT OF VOCATIONAL IDENTITY'.

males and females

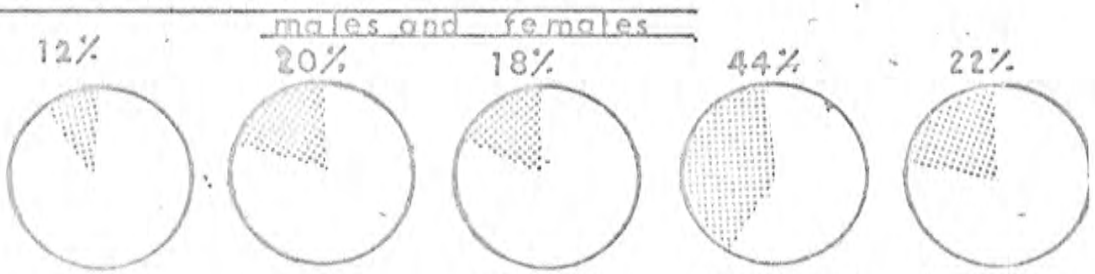
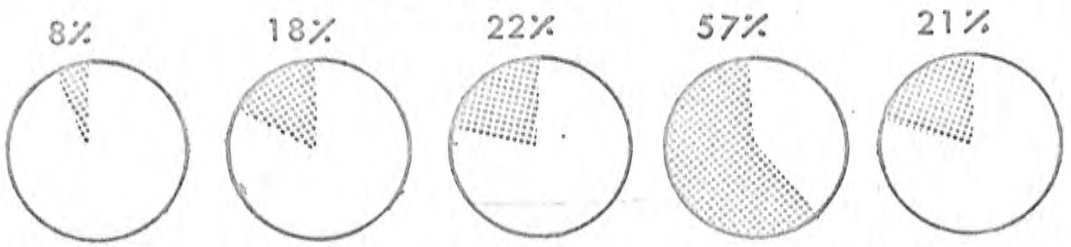


FIG 16

'CONFLICT OF GROUP PARTICIPATION'

males and females



'EXOGENOUS PROBLEMS'

males and females

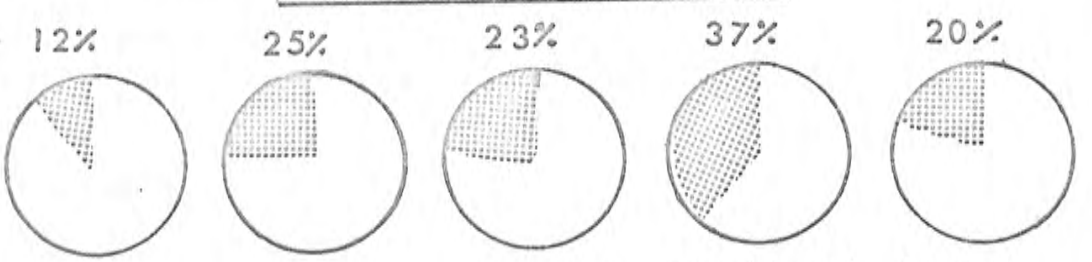


FIG 16 (cont).

Summary - Emotional state and attitudes of Students reporting for Casualty Service.

The findings suggest that a student seems more likely to report for treatment of an emotional illness at the Casualty service, when he or she has been previously assessed with a 'conflict' or 'problem'. Students who report for treatment of a 'sport injury' are more likely to have been assessed as 'normal'. These findings provide somesupport for the value of the method of assessment of the emotional state and attitudes of students used in this Study.

8.30. THE ASSESSMENT OF THE EMOTIONAL STATE AND ATTITUDES OF FIRST YEAR MEDICAL STUDENTS REPORTING FOR CASUALTY SERVICE.

Introduction.

An opinion has been expressed that 'Quota' systems in Universities cause students to have additional emotional stress. In order to consider this possibility, the students in Medicine were chosen, as, at the time of examination, this Faculty was one of the few under the Quota system.

Results.

The assessment of the Emotional state and attitudes of First year Medical Students who reported for Casualty Service.

Males and Females

Assessment	Number of students	Number in the classification N	M	I	R	X	P
'N'	74	74					
'M'	26		26				
'I'	3			3			
'X'	7					7	
'IM'	4		4	4			
'MX'	4		4			4	
'XX'	2					2	
'RM'	4		4		4		
'RI'	2			2	2		
'RIM'	7		7	7	7		
'RIMX'	1		1	1	1	1	
'RMX'	3		3		3	3	
'RIX'	3			3	3	3	
'RIXX'	1			1	1	2	
'RP'	1				1		1
Total	142	74	49	21	22	22	1

Table 86.

8.30 (cont)

There is no significant difference in the emotional assessment of the students in the 'total sample' and 'first year medical students' when they report for Casualty Service.

Since these routine medical examinations have been conducted, three medical students have suffered severe psychological illness which in one student was fatal. The assessments of these students were 'RM', 'RP', and 'RIMX'. These serious illnesses would suggest that the methods described in this Study to detect likely emotional 'breakdown' should be applied as soon as possible.

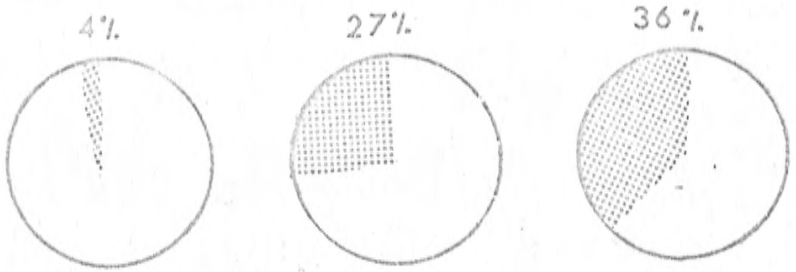
Casualty attendance and the earlier assessment of emotional state and attitudes of these First Year Medical Students.

Type of Emotional Assessment Table 86		Sport Injury	Accident	Illness Organic	Illness Emotional	Withdrawal
Normal	74	5	3	25	3	-
'M'	49	2	3	4	13	1*
'I'	21	-	1	2	8	1
'R'	22	2	2	5	16	4*
'X'	24	-	1	-	5	2
'P'	1				1	1

* Suicide

Table 87.

PERCENTAGE OF ASSESSED EMOTIONAL STATE OF FIRST YEAR MEDICAL STUDENTS WHO REPORTED WITH EMOTIONAL ILLNESS



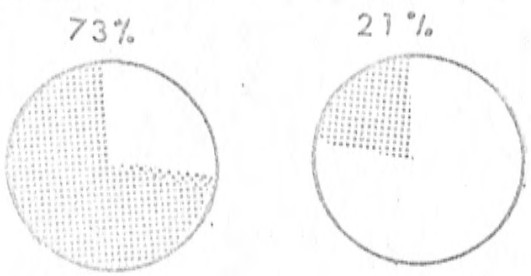


FIG 17

8.30 (cont)

Discussion.

Analysis of Table 87 and the pattern of emotional state and attitudes of the whole study suggests that students previously assessed with 'conflicts' and 'problems' have a greater chance of emotional illness ($P < 0.001$).

Fig. 17 would suggest that 'conflict of group participation' is associated with the higher percentage of emotional breakdown.

Summary.

'Quota' systems do not appear to place additional emotional strain on the students of this sample of First Year Medical Students.

These findings suggest that the incidence of emotional illness is greater when students have been assessed at 'routine medical examination' with 'conflicts' or 'problems'.

Further, it might be suggested that these 'developmental conflicts' could be discussed at medical interview after selection for the Medical Course. Such students might be advised to seek appropriate psychological or psychiatric advice which would allow them to gain insight into their particular difficulty It is suggested that this procedure would lessen emotional illness at a later time in the University course although there is no direct evidence to support this view.

CHAPTER 9.

9.00. THE ACADEMIC PERFORMANCE OF STUDENTS.

9.10. An examination of the relationship between the Examination Performance and the assessment of the Emotional state and attitudes of Students.

CHAPTER 9.

9.00. THE ACADEMIC PERFORMANCE OF STUDENTS.

Introduction.

This section shows the overall pattern of Academic performance of the students in this sample at the First year examination.

Procedure.

Permission was granted by the Academic Registrar of The University of Adelaide to obtain necessary details of the examination performance of students in this sample.

The results have been taken as a mean of the examination results of each student. If a student wrote examinations in 4 subjects, for example, all marks were related to 100 for each subject, the total marks added, and the total divided by 4.

A mean result of 75 or more is classified as a Distinction.

A mean result of 74-65 is classified as a Credit.

A mean result of 64-50 is classified as a Pass.

A mean result of 49 or lower is classified in the Fail group.

A category of Withdrawn has also been included.

The findings on the academic performance are shown in Table 88.

9.00 (cont)

Academic Results at the First Year Examination

Mean Result	Number in Classification	% of students
'Distinction'	66	4.4%
'Credit'	219	14.6%
'Pass'	620	41.3%
'Fail'	582	38.8%
'Withdrawn'	13	0.9%
	1,500	100.0%

Table 88.

60.3% of students gained sufficient examination marks to have 'passed' the First Year Examinations.

9.10. COMPARISON OF THE EMOTIONAL ASSESSMENT OF STUDENTS WITH THE EXAMINATION PERFORMANCE.

Table 89 shows the raw numbers of students in each performance group, and the relation to the emotional assessment.

Table 90 shows the percentages of students in each performance group when related to the emotional assessment.

Results.

Examination Performance	Number of Students Table 88.	Number in emotional assessment N	M	I	R	X	P
Distinction	66	36	27	5	11	10	-
Credit	219	125	74	16	26	25	1
Pass	620	313	202	118	114	99	-
Fail	582	197	207	181	163	164	4
Withdrawn	13	3	5	3	7	3	3
	1,500	674	515	323	321	301	8

Table 89.

Percentages in performance groups of emotional assessment

Examination Performance	Study	Emotional assessment N	M	I	R	X	P
Distinction	4.4%	5.5%	5.2%	1.5%	3.4%	3.1%	-
Credit	14.6%	18.6%	14.4%	5.0%	8.1%	8.3%	12.5%
Pass	41.3%	46.5%	39.2%	36.5%	35.5%	33.0%	-
Fail	38.8%	29.2%	40.2%	56.0%	50.8%	54.5%	50.0%
Withdrawn	0.9%	0.4%	1.0%	1.0%	2.2%	1.0%	37.5%

Table 90.

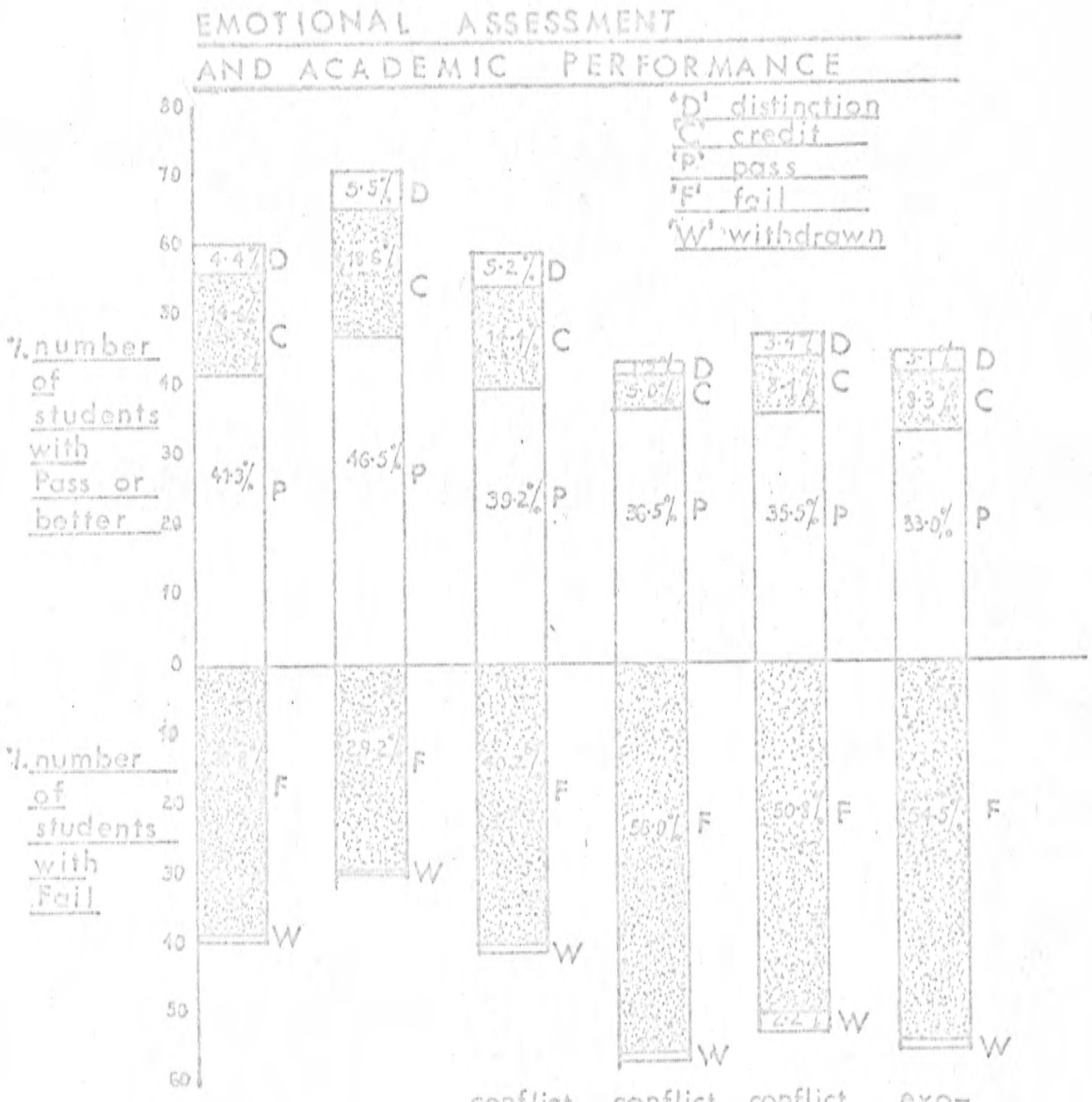

EMOTIONAL ASSESSMENT
AND ACADEMIC PERFORMANCE
'D' distinction
'C' credit
'P' pass
'F' fail
'W' withdrawn
% number of students with Pass or better
% number of students with Fail
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
4·4%
41·3%
5·5%
19·6%
46·5%
29·2%
5·2%
14·1%
39·2%
40·2%
5·0%
30·5%
56·0%
3·9%
9·1%
35·5%
50·8%
7·7%
9·3%
33·0%
54·5%
D
C
P
F
W
total sample
normal
conflict of dependence
conflict of vocation
conflict of group situation
exogenous problem

FIG 18

9.10 (cont)

Discussion.

Further analysis of Table 89 is presented in Table 90 with graphic representation in Fig. 18.

Students who are assessed as 'normal' have a smaller chance of failure ($P<0.001$). Table 90 suggests that 29.6% of these students failed or withdrew.

Students who are assessed with the 'conflict of dependence and independence' appear to show no significant variation in the examination performance of the whole sample.

Students who are assessed with 'the conflict of vocational identity' appear to show a diminished chance of obtaining a 'distinction' ($0.02>P>0.001$), and of obtaining a 'Credit' ($P<0.001$), but they have an increased chance of a 'Fail' ($P<0.001$). Table 90 shows that 1.5% of such students obtained a 'distinction', 5.0% a 'credit', and 56.0% a 'fail'.

Those students assessed with the 'conflict of group participation' show a smaller chance of obtaining a 'credit', ($P<0.001$), whereas they have an increased chance of obtaining a 'Fail' ($P<0.001$) and withdrawing ($0.05>P>0.02$). 8.1% of these students obtained a 'Credit', 50.8% obtained a 'Fail' and 2.2% withdrew.

Fewer students with the 'problems of an exogenous type' obtained 'Credits' ($P<0.001$) and a 'Pass' ($0.05>P>0.02$), whereas more failed than the students in this sample ($P<0.001$). Table 90 shows that 8.3% obtained a 'credit', 33.0% a 'pass' and 54.6% a 'fail'.

Summary - The relationship between Examination Performance and the Assessed Emotional state and attitudes of Students.

The findings suggest that students assessed as 'normal' at the medical interview are more likely to obtain a 'pass' or higher result in their examinations.

The detection of 'conflict of dependence and independence' seems to have no significant relation to the examination performance.

The greatest variation in examination performance appears in students assessed with the 'conflict of vocational identity'. The chances of such students obtaining a 'distinction' or 'credit' appears remote, but 'fail' is common.

The chance of obtaining a 'fail' is increased with the 'conflict of group participation', and 'problems of an exogenous type'.

CHAPTER 10.

10.0. SUMMARY OF THE FINDINGS.

RECOMMENDATIONS AND CONCLUSIONS.

10.1.1. History of Student Health.

10.1.2. Concept of Student Health.

10.2.1. Methods used in the Study.

10.2.2. Student Population.

10.3. History of the Family.

10.3.1. Parents' Occupation.

10.3.2. Parents' Occupation and Faculties of Students.

10.3.3. Age, mortality, morbidity of Parents.

10.3.4. Divorce or separation of Parents.

10.4. Students' Personal and Environmental History.

10.4.1. Home of Students.

10.4.2. Domicile of Students.

10.4.3. Smoking.

10.4.4. Alcohol.

10.4.5. Sport and Exercise.

10.4.6. Relaxation.

10.4.7. Periods of Study at night.

Recommendations.

10.5. Physical Health of Students.

10.5.01. General - Height and Weight.

10.5.02. Eyes and vision.

10.5.03. Ears and hearing.

10.5.04. Nose and Throat.

CHAPTER 10 (cont)

10.5. Physical Health of Students (cont)

10.5.05. Respiratory.

10.5.06. Cardio-vascular.

10.5.07. Gastro-intestinal.

10.5.08. Genito-urinary.

10.5.09. Nervous system.

10.5.10. Skeletal system.

10.5.11. Skin.

Recommendations.

10.6. Assessment of the Emotional state and attitudes of Students.

10.6.1. Relationship to Smoking.

10.6.2. Relationship to Alcohol.

10.6.3. Relationship to Students taking no exercise.

10.6.4. Relationship to Blood pressure elevation.

10.6.5. Relationship to Increased Pulse rate.

10.6.6. Relationship to Asthma.

10.6.7. Relationship to Painful menstruation.

10.6.8. Relationship to Acne.

Recommendation.

10.7. Prophylactic Measures.

10.8. Casualty Service.

Recommendations.

10.9. Academic Performance.

CHAPTER 10.

10.0. THE SUMMARY OF THE FINDINGS WITH CONCLUSIONS AND RECOMMENDATIONS.

Introduction.

In the Foreword of the 'Proceedings of the Australian and New Zealand Student Health Association' in 1965, (58), Dr. A. Peacham, the Vice Chancellor of the University of Otago, stated that 'the greatest resource of developing countries is the supply of trained manpower'.

Student Health in Universities has been accepted as an integral part of the total programme for University Students who will be a section of this 'trained manpower'. The Health Service prevents, and treats disease, when it arises. This Study has been concerned with the aspect of prevention.

10.1.1. THE HISTORY OF STUDENT HEALTH.

The relation of the Health of Youth of Classical Times has been shown to the 'Classical Games' and 'The Beauty of Art and Literature' of the Greek and Roman Times.

The history and evolution of Student Health has been traced in Western Society and in Australia. The influence of Student Health has spread to the Countries of Asia, where a pattern of Student Health Services has been established which is equal to the Services in more advanced countries.

Student Health began with the main emphasis on 'organic disease' and 'serious mental illness'. These aspects remain in much of the Student Health procedures, but the emphasis has changed to concern for the prevention of 'minor personal emotional difficulties'.

The evolution of the Student Health Service at the University of Adelaide has been traced in detail.

10.1.2. THE CONCEPT OF STUDENT HEALTH.

The factors involved in the life of a University student have been discussed, and, when it has been found that a student has difficulties with one of these factors, help to that student may be given by certain specialists in these factors.

From the writings of Blaine and Erikson, the Problems of

10.1.2. (cont)

the Late Adolescent Student have been divided into 'developmental conflicts' and 'the current stressful life situation'. In this Study, the 'developmental conflicts' considered are conflicts of 'dependence and independence', 'vocational identity' and 'group participation'. The conflicts of 'affective values' and 'sexual identity' have not been considered.

'Problems of an exogenous type' considered include 'domestic', 'economic', 'lodging', 'study' and 'sexual' difficulties.

10.2.1. THE METHODS USED IN THE STUDY.

Details have been given of the procedure used to conduct the Routine medical examinations of First Year Students at The University of Adelaide.

The method used at the interview and the medical examination has been detailed. At this interview the assessment of the emotional state and attitudes of students was made prior to the physical examination.

10.2.2. THE STUDENT POPULATION.

1,500 students were considered, all of whom were studying in the First year of their University Course. (75.2%) were males, and (24.8%) were females.

The mean age of students permanently resident in Australia was 18 years, but the mean age of students from South East Asia was 20-21 years.

Female students in this sample started at the University at a younger age than males. (36.0%) of females were aged 17 years, while (24.2%) of males were of that age. (17.7%) of the males and (7.5%) of the females were 19 years of age. A comparison was made with two similar surveys at Queen's University of Belfast, Northern Ireland.

The number of students who were born in Western Europe exceeded that expected on a general population basis, while the number who were born in Australia or the United Kingdom was less than expected from the general population.

10.3. THE HISTORY OF THE FAMILY.

10.3.1. Parents' Occupation.

The highest percentage of fathers of students had occupations of the 'professional', 'own business', 'clerical', and 'skilled tradesmen' groups.

The pattern of the occupations of the fathers showed an increased incidence of the 'professional' and 'semi-professional' groups, when a comparison was made with the occupation of males in the general population. The opposite situation was noted in fathers with the occupations 'skilled, semi-skilled and unskilled tradesmen'.

Female students with 'professional' fathers were more likely to attend the University.

It appeared that the female child of the mother with the occupation 'home duties, tertiary education' had a greater chance of attending the University.

The data showed that more mothers of students work than might be expected from the general population.

10.3.2. Parents' occupation and Faculties of Students.

Students with 'professional' fathers showed a preference for Medicine and Architecture. The opposite trend was noticed in students studying Economics. This course was preferred by students of 'semi-professional' fathers.

Agricultural Science appeared popular with students whose fathers had their 'own business'.

10.3.2 (cont)

Science was preferred by students whose fathers were 'skilled tradesmen', and Engineering showed popularity with male students, when the father was an 'unskilled worker'.

'Working mothers with no tertiary education' had student children who preferred Pharmacy, whereas 'working mothers with tertiary education' had children who showed a preference for Medicine.

10.3.3. Age, Mortality and Morbidity of Parents.

The mean age of fathers at the time of the medical examination of the students in this sample was - Male students - 50.8 years; Female students - 49.5 years.

The mean age of mothers at the time of the medical examination of the students in this sample was - Male students - 46.5 years; Female students - 45.6 years.

Three times as many fathers had died as mothers.

Where the father had died, 41.3% were dead as a result of vascular disease, while 60.7% of the mothers who had died did so as a result of cancer.

It appeared that male parents demonstrated a higher rate of illness. Asthma, chronic arthritis, mental illness, high blood pressure, lung disease and pulmonary disease showed the same incidence in male and female parents. Hay fever, cancer, and rheumatism or rheumatic fever occurred with greater frequency in mothers, but diabetes, heart disease or peptic

10.3.3 (cont)

ulcer was suffered with greater frequency by fathers.

The majority of these findings would be expected from mortality and morbidity data of the general community.

10.3.4. Divorce or Separation of Parents.

When the parents of these students had been divorced or separated, students are more likely to live with the mother.

The incidence of divorce and separation of parents of female students approached three times the rate of this situation in parents of male students.

10.4. THE STUDENTS' PERSONAL AND ENVIRONMENTAL HISTORY.

10.4.1. Home of Students.

41.8% of the students in this sample came from homes in the 'Medium Rate Section' of the Metropolitan Area.

Female students were more likely to come from the wealthier economic groups (The High Rate Area and the Rural Country).

Parents living in Country Towns seemed to give preference to their sons to attend the University.

10.4.2. Domicile of Students.

Most students in the Metropolitan Area preferred to live at home during the University Year. Students from the 'Low' and 'Medium Rate' sections of the Metropolitan Area showed a higher incidence of living at home than students from the 'High Rate' section. These latter students attended a University College in greater numbers.

A higher proportion (10.5%) of males attended a University College than female students (7.6%).

Country students from the 'Town' and 'rural' situations preferred to live in 'lodgings'. Interstate students showed a higher proportion living in University Colleges, and Male Overseas students liked 'Flat' life, while Overseas female students preferred 'Lodgings'.

When the domicile of the students was matched with the Faculty of students, the findings showed that -

10.4.2 (cont)

Male Agricultural Science students preferred 'lodgings'.

Male Economic students preferred 'Flats'. This finding might be explained by Overseas male students showing a preference for this domicile.

More male Law students lived in University Colleges, and fewer lived in Lodgings, but Technology students showed the reverse situation.

Female Arts students were less likely to be living in Lodgings.

(75.7%) of males and (77.4%) of females lived at home during the University Year.

10.4.3. Smoking by Students.

In this sample more male students (22.5%) smoked than female students (12.1%). This difference was significant. Male students in the Faculty of Economics and Female students in the Faculty of Arts were noted to show a greater tendency to smoke.

The occupation of the father, the domicile of the student, the area of the home of the parents, and the type of school attended for the secondary education did not appear to influence the student smoking.

It seemed that student children of mothers who work and who had no tertiary education showed a greater tendency to smoke.

10.4.3 (cont)

The data indicated that students showed an increased tendency to smoke, where the mother had died or where the mother was divorced or separated, and she was living away from the home of the student. Death, divorce or separation from the father did not appear to affect the tendency of the students to smoke.

The findings showed that students who were born in Western Europe had an increased incidence of smoking.

The majority of female students who smoked (53%) indicated that their cigarette consumption was 1 to 4 each day. Of the students who smoked, 45.8% of males and 26.6% of females smoked 11 or more cigarettes each day.

10.4.4. Alcohol drinking by Students.

46.8% of males and 33.6% of females in this sample stated that they drank alcohol. Analysis suggested that this difference was significant.

Apart from Male Law students who showed an increased tendency to take alcohol, the Faculty of the student seemed to have no bearing on the possibility of a student drinking alcohol.

The occupations of the mother and father appeared to have no influence on this habit.

The study suggested that male students in University Colleges showed an increased tendency to take alcohol, but the opposite situation appeared to apply for students in Flats. It

10.4.4 (cont)

appeared that male students who had attended an independent secondary school were more likely to drink alcohol at the time of entering the University.

Students from South East Asia showed a smaller proportion in the habit of drinking alcohol. These findings would suggest that affluence is a factor in the tendency to adopt the habit of drinking alcohol.

10.4.5. Sport and Exercise.

As the University year progresses, the amount of exercise taken by students appeared to diminish. In the first term 21.5% of males and 22.6% of females took no exercise. The percentage of such students increased as the year progressed until at the pre-examination and examination time 48.0% of males and 48.7% of females took no exercise.

When the students who exercised were considered, it was found that the time spent on exercise each week decreased as the University year progressed. In the first term, such students had the following mean hours of exercise - Males - 4.1 hours, Females - 3.4 hours. However, in the pre-examination and examination time, the average number of hours each week taken at exercise was reduced to - Males - 2.9 hours, and Females - 2.6 hours.

Male and female students in the Faculties of Arts and Science took less exercise than students in other Faculties.

10.4.6. Relaxation.

The data indicated that female students relax by participating in 'Art and Drama', 'Music and Singing', and 'Reading' to a greater extent than males. The reverse situation seemed to apply in Males who showed a preference to relax by means of 'Radio', 'Television' and 'Chess'.

The commonest type of relaxation at study breaks was 'eating', while the next popular method of such relaxation was 'watching television'.

10.4.7. Periods of Study at night.

The data indicated that male students study for longer periods at night. Further, it appeared that male and female students in the Faculties of Architecture and Medicine studied four or more hours each night.

Recommendations in the Light of Findings from the Personal and Environmental History.

The high incidence of smoking among students in this Study suggests the need for some education of students on the future dangers of this habit. At this age grouping, the suggestion that smoking may lead to lung cancer or coronary artery disease appears to have a minimal impact. It is the opinion of the author that a greater impact might be made if the general community set an example by making smoking an 'antisocial' behaviour pattern. The example of the adult

10.4 (cont)

parent is shown in this Study by the mother who works and who has no tertiary education and whose student son or daughter is more likely to smoke.

The Study suggests that anti-smoking campaigns should be directed to male students, especially those in the Economics course. Similarly such a campaign should be directed to Female Arts students who might adopt this habit while in group situations commonly used for Academic discussion.

Smoking has been shown to be more common in students born in Western Europe and in students who have an insecure life with the loss of their mother. These groups need special advice and help to prevent this habit.

As many students drink alcohol only when they are attending a Social function, it would be of interest for a follow up study of this habit in these students to be made.

10.5. THE PHYSICAL HEALTH OF STUDENTS.

10.5.01. General.

Male students who live permanently in Australia had a mean Height of 69.7 inches and a mean weight of 151.7 pounds. Female students who live permanently in Australia had a mean Height of 64.9 inches and a mean weight of 126.6 pounds.

Male students from South East Asia had a mean height of 66.7 inches and a mean weight of 133.2 pounds. Female students from South East Asia had a mean height of 63.3 inches and a mean weight of 110.8 pounds.

10.5.02. Eyes and Vision.

The incidence of colour blindness was recorded, and the relationship of this condition to certain courses was discussed. One in five students appeared to have vision which was defective and which required ophthalmological investigation

2.3% of students suffered from amblyopia, and 5 students were noted with uncorrected squints.

10.5.03. Ears and Hearing.

The occurrence of deafness and ear diseases was described and it was found that 50% of the students who had hearing loss were unaware of the condition.

The deafness resulting from 'wax in the ears' was shown to be important in the student health context.

10.5.04. Nose and Throat.

Abnormal conditions of this system were observed and

10.5.04 (cont)

recorded. Such abnormal states were referred for appropriate treatment. The problem of Allergic rhinitis in students during the September and October period was discussed with special reference to examination stress and its occurrence in students from South East Asia.

The use of the metronome and psychiatric treatment of students with Stammer was considered.

10.5.05. Respiratory.

No case of active pulmonary tuberculosis was noted in this sample.

5.2% of these students indicated that they had suffered from Asthma at some time of their lives.

10.5.06. Cardio-vascular

Blood pressure

Males - permanently in Australia - mean - 127/68.

Females - permanently in Australia - mean - 116/65.

Males - from South East Asia - mean - 120/65.

Females - from South East Asia - mean - 104/59.

The findings were compared with other studies. Where elevated blood pressure was found, consideration was made to the possibility of subsequent hypertensive disease.

Pulse.

The mean pulse of males was 72, and females was 77. The male pulse range was 44 to 130, while the female pulse

10.5.06 (cont)

range varied from 56 to 130.

Cardiac murmurs.

6.5% of the students in the sample were considered to have a 'functional murmur', and 4.2% of these students appeared to have an 'organic cardiac murmur'. These 'organic murmurs' were classified into those with established lesions and those with suspected lesions.

The students who indicated the history of rheumatic fever were considered, and it was found that 4 of 17 such students had residual cardiac valvular lesions. 17 students were suspected of rheumatic valvular disease, yet none of these students had given any history of rheumatic fever.

10.5.07. Gastro-intestinal.

The dental state of students was considered.

Four students were found to have a hernia.

10.5.08. Genito-urinary.

A male student in this sample was found to suffer from diabetes mellitis.

Albuminuria, both orthostatic and organic, were considered, and all such students were placed in the situation where further follow-up studies would be made.

The various abnormal genital states were documented, including 6 males with undescended testis which included one student where the condition was bilateral.

10.5.08 (cont)

47.6% of female students stated that they suffered from painful menstruation. Two aspects of this pain were discussed - i. Pain causing loss of time at the University studies, and ii. anxiety caused by a possible clash of the painful periods and the examinations. This anxiety appears to interfere with the efficient examination preparation. It was suggested that, for such a situation, the use of ovulation suppression drugs is of value, following which treatment a painless period would be anticipated.

10.5.09. Nervous System.

Few disabilities of this system were noted.

10.5.10. Skeletal System.

Abnormalities of posture, the spine and thorax, limbs and muscles, joints, feet and hands were considered, and the abnormalities were noted.

66.9% of males and 70.7% of females in this sample were assessed with a 'good' posture, whereas 1.9% of males and 5.1% of females showed a 'bad' posture.

The incidence of scoliosis was considered, including factors such as rowing or shortening of one leg which might produce this condition. The possibility of some of these latter students having suffered a sub-clinical attack of poliomyelitis in the 1949-51 epidemic was suggested.

Bow legs and Knock knees were discussed. It was

10.5.10. (cont)

suggested that flat feet appeared to be of genetic origin, whereas everted ankles resulted from a previous ankle injury.

Six male students had amputations of a phalanx of the finger, and in four cases these injuries resulted from chemical explosions.

10.5.11. Skin conditions.

The occurrence of skin lesions were documented.

311 students suffered from acne.

Recommendations in the light of findings of the Physical Health of Students.

It is certain that poor visual acuity will interfere with the Academic performance of students. It has been found that one in five students required ophthalmological investigation for defective visual acuity. Therefore, it is recommended that the Student Health Service at The University of Adelaide should continue the procedure of routine medical examination of First Year full-time Students. It is also recommended that, as facilities become available, these medical examinations should include all First year part-time Students and students in the Final year of their University Course.

With the knowledge that amblyopia and squints respond to early and full treatment, the introduction of the 'Pre-School Medical Examinations' as advocated by Professor W.B. McDonald (41) would be to the advantage to future students with

10.5 (cont)

either or both of these conditions.

In this Student Health context, it has been recommended that consideration of the emotional state of students together with possible life stress situations should be considered before a student with an abnormal cardiac murmur is referred for further investigation.

Students with increased pulse rates and with increased systolic and diastolic pressure should be further investigated by emotional assessment.

The conclusion was made from this survey that students adopt good attitudes towards dental care.

Medical officers who treat female students for painful menstruation should be aware of the anxiety in such students brought about by a clash of a painful period and the examinations.

It appears possible that there may be a relaxation between asthma in infancy and the later occurrence of 'funnel' chest.

Sport injuries have been discussed, and a recommendation is made that trained first-aid personnel should attend sporting matches involving bodily contact sport. The medical officer should watch matches from which excessive numbers of injuries come. He should ask - 'Are the players trained for that sport?', and 'Are the matches being adequately supervised?'.

10.5 (cont)

It is recommended that the problem of vehicular accidents require urgent consideration by doctors, engineers, and psychologists to reduce the alarming and tragic road toll of this and other age groups.

Teachers and students of Chemistry at secondary schools should be warned of the dangers of misuse of explosive chemicals.

In this context, it is stressed that skin disease in students presents a two-fold problem, namely attention to the physical condition and the emotional state because of possible feelings of rejection by other students.

10.6. THE ASSESSMENT OF THE EMOTIONAL STATE AND ATTITUDES OF STUDENTS.

A concept and method of assessment of the emotional state and attitudes of students has been submitted. Students were assessed at the interview before the medical examination in the following terms -

'Normal'. A student who appeared well adjusted to the 'conflicts' of passing from childhood to adulthood, and to the 'problems' of his or her current life.

'Development conflicts'. A student who had one or more of the following 'conflicts' -

'Conflict of dependence and independence'.

'Conflict of vocational identity'.

'Conflict of group participation'.

'Life stress problems'. A student who had one or more of the following 'problems' -

'Domestic'

'Economic'

'Lodging'

'Study'

'Sexual'.

Female students were assessed as 'normal' more often than males, but analysis showed that the pattern of the emotional 'conflict' and 'problems' was the same in the male and female students of this sample.

10.6. Comparison of the emotional state and attitudes with various social and physical factors suggested that -

10.6.1. Smoking.

Male students who smoke had a greater incidence of the 'conflict of vocational identity'.

10.6.2. Alcohol.

Male students who drank alcohol showed a decreased incidence of the 'conflict of group participation'.

10.6.3. No exercise.

Male and female students who did not take exercise appeared to be less likely to be free of 'conflicts'. Such male students had an increased tendency to be assessed with the 'conflict of dependence and independence', 'conflict of vocational identity' and 'conflict of group participation', but showed no variation from the general pattern of 'the problems of an exogenous type'. Female students who did not take exercise were found to have a greater incidence of the 'conflict of dependence and independence', 'conflict of group participation' and 'problem of an exogenous type'.

10.6.4. Blood pressure.

All the 'developmental conflicts' and 'exogenous problems' appeared to be associated with the elevation of the blood pressure to 140 or more/80 or more in Male students. The 'conflict of dependence and independence' and 'conflict of group participation' seemed to be associated to an elevated

10.6.4 (cont)

systolic pressure only to 140 or more. Male students assessed as 'normal' had a smaller incidence of blood pressure elevation to 140 or more/80 or more.

In female students, the 'developmental conflicts' were associated with the elevation of the blood pressure to 130 or more/75 or more, but these 'conflicts' seemed to have no association with elevation of the systolic or diastolic pressure only. In female students, the problem of the exogenous type appears to have no relation to elevation of blood pressure.

10.6.5. Pulse. In male students the 'developmental conflicts' and 'life stress problem' were associated with pulse rate elevation, but female students had pulse rate elevation in the two conflicts of 'dependence and independence' and 'group participation'.

10.6.6. Asthma. Contrary to the expected findings, students with the history of asthma showed no difference in the pattern of assessment of emotional state and attitudes to the pattern found in the whole sample.

10.6.7. Painful Menstruation. Female students with painful periods seemed to show no difference in the assessment of 'conflicts' or 'problems' from all female students.

10.6.8. Acne. Students with acne had an increased incidence of the 'conflict of dependence and independence' and 'problems of the exogenous type'.

10.6. Recommendations and Conclusions in the Light of the Findings of the Assessment of the Emotional State and Attitudes of Students.

The pattern of disease in any community varies with the passage of time. At the middle of the twentieth century, the major emphasis of student health concerned physical and emotional illness. Minor emotional problems cause impairment of Academic performance, and, if unresolved, may lead to major emotional illness.

By defining a method and by application of this method, two measures of prevention of minor emotional illness can be demonstrated.

a. As a sequence to the emotional assessment, made at the medical examination, the medical officer has in his possession a record of any student who may return at a later time in a state of emotional difficulties. When such a student is upset it is difficult to obtain a clear assessment of this student's emotional 'developmental conflicts' or 'problems of an exogenous nature'. With this basic knowledge of the student, the medical officer has a starting point from which he can proceed more effectively to help the student, and initiate a discussion which will assist the student to resolve the difficulties.

b. An equally important preventive measure, however, might be applied at the time of the routine medical exam-

10.6 (cont)

ination. When emotional 'conflicts' or 'problems' are discovered by the method described in this Study, the medical officer can discuss such areas of emotional stress with the student, thus giving the student some insight into the 'developmental conflict' or the 'stress problem'. By using such a method, it might be suggested that 'minor personal emotional illness' will be reduced.

It has been suggested in the Study that the student with such 'conflicts' and 'problems' need not necessarily be advised by the student medical officer, who may desire the student to be referred to a Student Counsellor or Psychiatrist.

The summary of the findings shows that more female students were assessed as 'normal'. It might be expected that female students have less conflicts of vocational identity. But analysis shows that there is no statistical difference in the 'conflicts' of male and female students.

The habit of smoking shows an increase in the male students with a conflict of 'vocational identity'. It would seem that this stems from an insecure situation.

Male students who drink alcohol show a decreased tendency to be assessed with 'conflict of group participation', and the corollary might be suggested that students with this conflict show the tendency not to take alcohol. It might be suggested

10.6 (cont)

that these 'isolate' students should be encouraged to overcome such an emotional difficulty by means other than adopting the habit of drinking alcohol. Perhaps encouragement to participate in group situations such as clubs, playing sport, and student camps will help this isolate student to overcome his or her difficulties.

It is suggested that both male and female students who take no exercise are less likely to be assessed as 'normal', and more likely to have the conflicts of 'dependence and independence' and 'group participation'. These findings suggest a method of assisting the student who has been assessed with 'emotional conflict', and who is resistant to any advice offered which might aid him to gain insight into these emotional difficulties. Encouragement to take exercise and play sport would appear to promote good physical and emotional health.

Hines has demonstrated the possibility of hypertensive disease in later life, when the blood pressure of students is elevated in that age group. The findings of this Study suggest that male students with blood pressures of 140 or more/ 80 or more show a greater incidence of 'developmental conflicts'. It might be possible to reduce potential hypertensive disease of psychosomatic origin by the assessment of 'developmental conflicts' and by the prevention or alleviation of minor emotional illness arising from these 'conflicts'.

10.6 (cont)

As 'bad posture' appears to be associated with an increase in the 'developmental conflict', it might be suggested that attention to this condition in the earlier years is possible by appropriate methods of which encouragement to take exercise would assist greatly.

The findings suggest that conflict of 'dependence and independence' and 'problems of an exogenous type' have a part to play in acne. Attention to these emotional difficulties may help the student with acne.

10.7. PROPHYLACTIC MEASURES.

The method used in the Health Service to detect, prevent and isolate pulmonary tuberculosis has been shown.

Other preventive measures to prevent poliomyelitis, tetanus and diphtheria have been described.

10.8. THE CASUALTY SERVICE.

The findings suggest that students who were assessed with emotional 'conflicts' and 'problems' were more likely to attend at a later time with emotional difficulties.

This finding applies to the two groups studied in this survey, namely the whole student sample and the first year medical students. In this latter group, the highestnumber of emotional breakdowns arose in students who were assessed with the 'conflict of group participation'.

Recommendations and Conclusions in the Light of Findings of the Investigation of Students returning for Casualty Service.

The findings ap ear to confirm the validity of the assessment of the emotional state and attitudes of students.

In an attempt to reduce the incidence of serious emotional illness in students, it might be recommended that a routine medical examination be conducted on medical students as soon as the 'Quota' is announced. By performing these medical examinations before the University year starts, it might be possible to find emotional 'conflicts' and 'problems' for which the students would be able to receive specialist psychiatric advice, before the student is submitted to the stress of University life.

10.9. THE ACADEMIC PERFORMANCE.

4.4% of these students attained a 'distinction', 14.6% reached the 'Credit level', 41.3% 'passed', and 38.8% 'failed', while 0.9% 'withdrew'.

Students assessed as emotionally 'normal' had a better chance of passing at the first year examinations.

The observation of the 'conflict of dependence and independence' appears to have no significant effect on the examination performance, but the conflicts of 'vocational identity' and 'group participation', and the problem of 'the exogenous type' seems to be associated with an increase in the failure rate.

Academic Performance - Recommendations and Conclusions.

If by the resolution of the conflicts of 'vocational identity' and 'group participation' and the problems of 'an exogenous type' the student might be reassessed as 'normal', his or her chances of obtaining a 'pass' level or better would seem to be increased.

It might, therefore, be recommended that the methods described in this Study concerning the assessment of the emotional states and attitudes should be applied.

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APPENDIX.

1. Letter from Sir Trent de Crespigny to Medical Students.
2. 'Record Sheet for Medical and Physical Examinations'. Department of Physical Education, The University of Adelaide. (in cover)
3. 'Health Service Record Sheet of Medical and Physical Examination' 1950. (in cover)
4. Constitution of 'The Australian and New Zealand Student Health Association'.
5. 'Student Health Service Form' - 1964. (in cover)
6. 'Performance Sheet'. (in cover)
7. Age of Students and Area of Birth of Students.
8. Occupations of Parents and Faculty of Students.
9. Areas of Home of Students in Metropolitan Area.
10. Comparison of Home of Parent, Place of Domicile of Students during the University Year, and the Faculty of Students.
11. Hours of Sport and Exercise of Students.
12. Type of Relaxation at Week-ends.
13. A. Heights.
    B. Weights.
14. Pulse rate of Students.
15. A. Functional Cardiac Murmurs.
    B. Organic Cardiac Murmurs.

APPENDIX 1.

The University of Adelaide.

Dear Mr.

The Curriculum Committee wishes to draw your personal attention to the health of medical students and asks for your co-operation.

As you know the Curriculum has been compressed by shortening vacations so that graduation may occur before the usual time. This has been done as an urgent war measure and is a vital part of the general war effort. The Committee realises that this restricts the leisure of undergraduates and feels that in the present emergency some advice should be given to students in the matter of keeping themselves fit so that the programme may be carried out. It is obvious that specific rules cannot be laid down that would be applicable to all, but the Committee feels that it should urge you to pay particular attention to your health and not to back the feeling of wellness that you may at present have. With this object in view will you please co-operate by

(1) Seeking the advice of a member of the teaching staff if any difficulty arises in your work.

(2) Arranging your work as systematically as possible and under no circumstances leave your reading for the latter part of the year.

(3) Attending to any minor complaint immediately, remembering that care at the commencement of an illness may prevent ill-health dragging on for weeks.

(4) Discussing quite frankly with a member of the staff any matter concerning your health about which you have the slightest doubt.

(5) Arranging definite hours of relaxation. You may think time given to this is wasted but it is the most important single factor in keeping well.

(6) Undergoing each year a complete medical examination, such examination to include a Chest X-ray. Forms for this examination can be obtained from Room 126, Medical Institute.

This letter has been written for your personal welfare and the Committee asks you to give it your serious consideration.

Yours sincerely,

(Signed) C.T. Ch. de Crespigny.
Dean
Faculty of Medicine

APPENDIX 4.

The Australian and New Zealand Student Health Association was formed in Dunedin in 1965, and its Constitution formally adopted.

OBJECTS: Its Objects are defined as:

a. The promotion of health in Universities and other Institutions of Higher Education.

b. The sponsoring of Student Health Conferences and the organisation of close professional and social contacts between its members.

c. The promotion of research into aspects of Student Health.

d. The protection and promotion of the interests of all those engaged in Student Health work.

MEMBERSHIP: Applications for membership are invited from those qualified under the following headings:

a. ORDINARY MEMBERS who shall be medical practitioners engated in Student Health practice in Universities and other Institutions of Higher Education, and those medical and non-medical graduate members of staffs of Universities and other Institutions of Higher Education, who are approved by the Executive Committee of the Association.

b. ASSOCIATE MEMBERS who shall be other persons interested in the aims and objectives of the Association. Associate members shall not be entitled to hold office or to vote.

c. INSTITUTIONAL MEMBERS who shall be Teaching Hospitals, Universities, other Institutions of Higher Education, their Student Representative bodies and such other organisations as subscribe to the aims and objectives of the Association. Institutional members shall be entitled to send a maximum of three delegates to meetings and conferences. They shall not be entitled to hold office or to vote.

Such persons or institutions shall become members after election at a General Meeting of the Association as hereinafter provided, and upon payment of the prescribed subscription.

APPENDIX 7.

Age of Students - Area of Birth.

Males

Area of Birth	Total	Age 16	17	18	19	20	21	22	23	24+
Australia	797	3	218	402	127	22	12	4	4	5
United Kingdom	90	1	25	47	13	-	-	-	-	-
New Zealand	1	-	-	1	-	-	-	-	-	-
Western Europe	95	-	19	46	23	6	-	1	-	-
Southern Europe	40	-	6	12	13	7	1	-	-	1
Eastern Europe	10	-	-	4	3	-	2	1	-	-
Malaysia) Chinese Singapore)	57	-	1	7	15	18	10	2	3	1
Indian	4	-	-	1	1	1	1	-	-	-
Hong Kong	9	-	-	1	2	1	4	1	-	-
Indonesia	4	-	-	-	-	3	1	-	-	-
Other Areas	21	-	4	13	3	-	-	-	1	-

Age of Students - Area of Birth

Females

Area of Birth	Total	Age 16	17	18	19	20	21	22	23	24+
Australia	275	4	114	141	11	4	1	-	-	-
United Kingdom	33	1	10	16	3	3	-	-	-	-
New Zealand	1	-	-	1	-	-	-	-	-	-
Western Europe	37	-	5	26	5	-	-	1	-	-
Southern Europe	7	-	-	5	2	-	-	-	-	-
Eastern Europe	3	-	1	2	-	-	-	-	-	-
Malaysia) Chinese Singapore)	10	-	1	1	2	1	2	1	2	-
Indian	1	-	-	-	1	-	-	-	-	-
Hong Kong	-									
Indonesia	1	-	1	-	-	-	-	-	-	-
Other Areas	4	-	1	1	2	-	-	-	-	-

APPENDIX 8.

Occupation of Parents and Faculty of Students.

Certain abbreviations are used in Tables 1 and 2 of Appendix 8.

Fathers' occupation	
Professional	(P)
Semi-professional	(SP)
Clerical	(Cl)
Own Business	(OB)
Skilled worker	(S)
Semi-skilled worker	(SS)
Unskilled worker	(US)
Not known	(NK)

Mothers' occupation	
Home duties, no tertiary education	(HNT)
Working, no tertiary education	(WNT)
Home, tertiary education	(HT)
Working, tertiary education	(WT)
Not known	(NK)

Faculties of Students

Agricultural Science	AgS.
Architecture	AR.
Arts	A.
Dentistry	D.
Economics	Ec.
Engineering	En.
Law	LL.
Medicine	M.
Music	Mu.
Pharmacy	PH.
Physiotherapy	PT.
Physical Education	PE.
Science	Sc.
Social Studies	SS.
Technology and Applied Science	T.

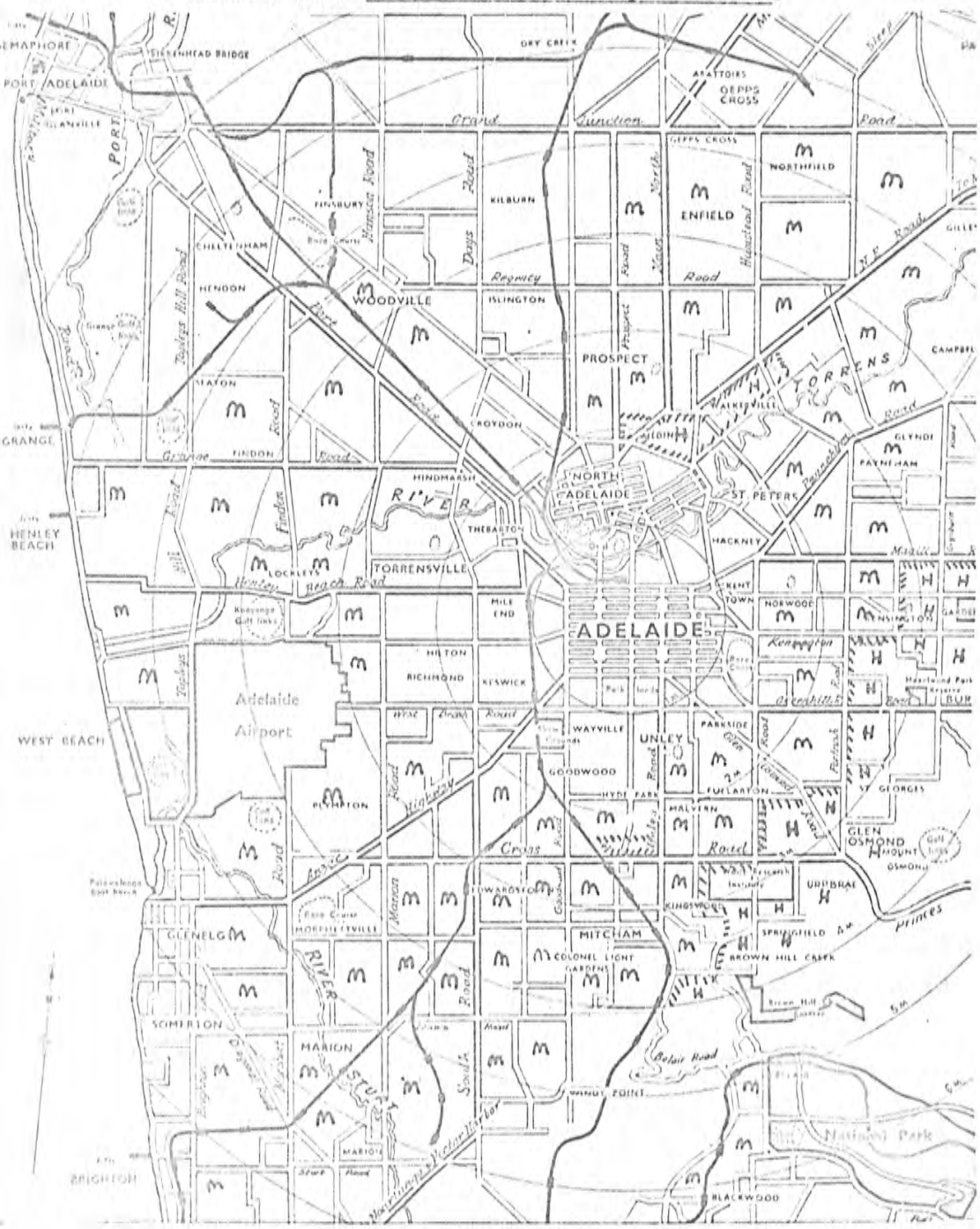
Fathers' Occupation and Faculty of Students

Student's Faculty	Sex	Father's Occupation P	SP	CL	OB	S	SS	US	NK	Total	Mand F
AgS.	M	9	1	9	17	6	1	-	-	43	
	F	-	-	-	2	1	-	-	-	3	46
AR.	M	7	2	4	2	5	1	-	-	21	
	F	4	1	-	2	-	1	-	-	8	29
A	M	10	7	10	13	11	4	2	2	59	
	F	39	18	21	23	14	4	5	1	125	184
D	M	19	11	13	14	9	1	-	-	67	
	F	5	3	1	1	2	1	-	-	13	80
Ec.	M	7	13	20	19	7	-	1	-	67	
	F	-	2	-	3	1	-	-	-	6	73
En.	M	45	14	44	40	35	7	11	1	197	197
LL.	M	25	10	22	22	9	4	-	-	92	
	F	5	3	4	5	2	1	-	1	21	113
M.	M	38	20	23	17	18	4	3	1	124	
	F	5	2	2	4	2	-	2	1	18	142
Mu.	F	2	1	1	3	1	-	-	-	8	8
PH.	M	5	3	12	12	10	4	5	1	52	
	F	5	-	2	7	1	-	-	-	15	67
PT.	M	1	1	1	2	2	-	-	-	7	
	F	6	7	4	7	5	-	-	-	29	36
PE.	M	1	-	1	1	5	-	-	-	8	
	F	2	-	2	1	-	-	-	-	5	13
Sc.	M	50	31	52	51	69	15	12	2	282	
	F	20	12	15	19	15	3	2	-	86	368
SS.	M	-	1	-	-	1	-	-	-	2	
	F	8	4	3	11	2	1	-	-	29	31
T.	M	16	15	20	27	26	3	-	-	107	
	F	2	2	1	-	1	-	-	-	6	113
Total		336	184	287	325	260	55	43	10		1,500

Mothers' occupation and Faculty of Students

Student's Faculty	Sex	Mother's Occupation HNT	WNT	HT	WT	NK	Total	M and F
AgS.	M	29	2	10	2	-	43	
	F	3	-	-	-	-	3	46
AR.	M	15	3	-	3	-	21	
	F	2	2	2	2	-	8	29
A.	M	42	9	4	4	-	59	
	F	70	13	25	17	-	125	184
D.	M	43	8	9	7	-	67	
	F	7	3	1	2	-	13	80
Ec.	M	55	4	6	2	-	67	
	F	3	1	-	2	-	6	73
En.	M	127	31	18	21	-	197	197
LL.	M	57	11	17	7	-	92	
	F	11	5	3	2	-	21	113
M.	M	64	22	18	20	-	124	
	F	12	3	2	1	-	18	142
Mu.	F	5	2	-	1	-	8	8
PH.	M	34	13	3	2	-	52	
	F	8	4	2	1	-	15	67
PT.	M	5	-	2	-	-	7	
	F	19	2	6	2	-	29	36
PE.	M	8	-	-	-	-	8	
	F	5	-	-	-	-	5	13
Sc.	M	181	47	39	15	-	282	
	F	39	20	17	9	1	86	368
SS.	M	1	-	-	1	-	2	
	F	20	2	3	4	-	29	31
T.	M	71	18	11	7	1	107	
	F	1	1	3	1	-	6	113
Total		937	226	201	135	1		1,500

APPENDIX (9). Area of ROAD in Metropolitan Area.



APPENDIX 10.

Comparison of the Home of the Parent, Place of Domicile of Student during the University Year, and the Faculty of Students.

MALES

Home High Rate Area

Abode	Total	AgSc.	Faculty AR	A	D	Ec	En	LL	M	Mu	PH	PT	PE	Sc	SS	T
Home	183	5	1	7	19	19	24	27	22	-	5	1	-	38	-	15
College	21	-	1	2	1	-	3	5	4	-	-	-	-	5	-	-
Lodging	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Flat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	205	6	2	9	20	19	27	32	26	-	5	1	-	43	-	15

Home Medium Rate Area

Abode	Total	AgSc	Faculty AR	A	D	Ec	En	LL	M	Mu	PH	PT	PE	Sc	SS	T
Home	470	14	12	25	29	20	77	38	55	-	22	2	3	126	1	46
College	5	-	-	-	1	1	-	-	1	-	-	-	-	2	-	-
Lodging	4	-	-	-	-	-	1	-	1	-	-	-	-	2	-	-
Flat	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	480	14	12	25	30	21	78	38	57	-	22	2	3	130	1	47

Home Low Rate Area

Abode	Total	AgSc	Faculty AR	A	D	Ec	En	LL	M	Mu	PH	PT	PE	Sc	SS	T
Home	174	3	4	8	8	4	33	4	20	-	16	3	3	50	-	18
College	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Lodging	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Flat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	175	3	4	9	8	4	33	4	20	-	16	3	3	50	-	18

Home Country Town

Abode	Total	AgSc	Faculty AR	A	D	Ec	En	LL	M	Mu	PH	PT	PE	Sc	SS	T
Home	18	3	-	1	-	2	3	1	1	-	1	-	1	3	-	2
College	34	2	-	3	1	3	3	9	2	-	1	-	-	7	-	2
Lodging	50	2	-	2	1	1	12	2	2	-	4	-	-	17	1	6
Flat	5	-	-	-	-	1	1	-	-	-	1	-	-	1	-	1
Total	107	7	1	6	2	7	19	12	5	-	7	-	1	28	1	11

MALES

Home Country Rural

Abode	Total	Faculty														
		AgSc	AR	A	D	Ec	En	LL	M	Mu	PH	PT	PE	Sc	SS	T
Home	8	1	-	-	1	-	2	-	1	-	1	-	-	2	-	-
College	16	4	-	-	1	1	2	2	1	-	-	-	1	4	-	-
Lodging	29	4	-	3	-	2	2	1	3	-	-	-	-	8	-	6
Flat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	53	9	-	3	2	3	6	3	5	-	1	-	1	14	-	6

Home - Interstate

Abode	Total	Faculty														
		AgSc	AR	A	D	Ec	En	LL	M	Mu	PH	PT	PE	Sc	SS	T
College	19	-	-	2	1	1	5	1	6	-	-	1	-	2	-	-
Lodging	11	-	1	1	-	-	2	-	-	-	-	-	-	2	-	5
Flat	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
	31	-	1	4	1	1	7	1	6	-	-	1	-	4	-	5

Home - Overseas

Abode	Total	Faculty														
		AgSc	AR	A	D	Ec	En	LL	M	Mu	PH	PT	PE	Sc	SS	T
College	22	1	1	-	2	1	10	-	1	-	-	-	-	4	-	2
Lodging	20	2	-	-	1	3	5	-	3	-	-	-	-	3	-	3
Flat	35	1	-	3	1	8	12	2	1	-	1	-	-	6	-	-
	77	4	1	3	4	12	27	2	5	-	1	-	-	13	-	5

FEMALES

Home High Rate Area

Abode	Total	AgSc	AR	A	D	Ec	Faculty LL	M	Mu	PH	PT	PE	Sc	SS	T
Home	90	-	3	33	1	-	6	3	1	3	10	2	19	6	3
College	4	-	-	2	-	-	2	-	-	-	-	-	-	-	-
Lodging	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Flat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	94	-	3	35	1	-	8	3	1	3	10	2	19	6	3

Medium Rate Area

Abode	Total	AgSc	AR	A	D	Ec	Faculty LL	M	Mu	PH	PT	PE	Sc	SS	T
Home	143	-	1	58	5	1	7	4	5	4	9	1	34	12	2
College	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Lodging	2	-	-	1	-	-	-	-	-	-	-	-	-	1	-
Flat	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Total	147	-	1	60	5	1	8	4	5	4	9	1	34	13	2

Home Low Rate Area

Abode	Total	AgSc	AR	A	D	Ec	Faculty LL	M	Mu	PH	PT	PE	Sc	SS	T
Home	50	1	1	15	3	-	2	6	-	2	2	1	14	2	1
College	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lodging	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Flat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	50	1	1	15	3	-	2	6	-	2	2	1	14	2	1

Home Country Town

Abode	Total	AgSc	AR	A	D	Ec	Faculty LL	M	Mu	PH	PT	PE	Sc	SS	T
Home	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
College	5	-	-	1	-	-	-	1	-	1	2	-	-	-	-
Lodging	14	-	2	1	1	-	-	1	-	2	1	-	3	3	-
Flat	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Total	20	-	2	2	1	-	-	2	-	4	3	-	3	3	-

FEMALES

Home Country Rural

Abode	Total	Faculty AgSc	AR	A	D	Ec	LL	M	Mu	PH	PT	PE	Sc	SS	T
Home	5	-	-	3	-	-	-	-	-	-	1	-	1	-	-
College	12	-	-	4	-	-	2	1	1	1	1	-	2	-	-
Lodging	21	2	-	3	1	1	1	2	-	-	2	1	5	3	-
Flat	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Total	39	2	-	11	1	1	3	3	1	1	4	1	8	3	-

Home Interstate

Abode	Total	Faculty AgSc	AR	A	D	Ec	LL	M	Mu	PH	PT	PE	Sc	SS	T
College	5	-	-	2	1	-	-	-	-	-	-	-	1	1	-
Lodging	4	-	-	-	-	1	-	-	-	-	-	-	2	1	-
Flat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	9	-	-	2	1	1	-	-	-	-	-	-	3	2	-

Home Overseas

Abode	Total	Faculty AgSc	AR	A	D	Ec	LL	M	Mu	PH	PT	PE	Sc	SS	T
College	2	-	-	-	-	1	-	-	-	-	-	-	1	-	-
Lodging	8	-	1	-	1	1	-	-	-	1	1	-	3	-	-
Flat	3	-	-	-	-	1	-	-	1	-	-	-	1	-	-
Total	13	-	1	-	1	3	-	-	1	1	1	-	5	-	-

APPENDIX 11.

Hours of Sport and Exercise of Students

MALES First Term

Faculty	No Sport	Hours of sport and Exercise per week 1	2	3	4	5	6	7	8	9	Taking Sport	Total Hours
Ag.Sc.	5	-	4	8	10	5	9	-	1	1	38	168
Arch.	4	2	2	4	4	1	3	-	1	-	17	65
Arts	16	5	8	4	13	2	7	-	-	4	43	173
Dent.	15	5	5	7	20	6	7	-	-	2	52	206
Econ.	14	4	5	7	15	8	9	1	2	2	53	230
Eng.	43	11	20	19	54	15	25	-	8	2	154	631
Law	16	4	2	8	25	10	16	2	5	4	76	368
Med.	21	10	12	21	27	16	12	-	3	2	103	399
Pharm.	13	-	2	4	17	3	5	1	3	4	39	196
Physio.	-	1	1	1	1	1	1	-	1	-	7	29
Phys.Ed.	-	-	-	-	3	-	1	-	3	1	8	51
Science	70	32	30	37	63	18	18	2	11	1	212	764
Soc.St.	-	-	-	-	-	2	-	-	-	-	2	10
Tech.	26	5	10	11	27	14	6	2	4	2	81	336

Appendix 11. Table 1.

Hours of Sport and Exercise of Students.

MALES. Second Term

Faculty	No sport	Hours of sport and exercise per week 1	2	3	4	5	6	7	8	9	Taking Sport	Total Hours
Ag.Sc.	8	1	2	5	7	14	4	-	1	1	35	159
Arch.	6	2	2	1	3	5	2	-	-	-	15	58
Arts	16	6	9	4	14	5	3	-	-	2	43	153
Dent.	15	6	8	7	13	12	4	-	1	1	52	196
Econ.	14	8	6	7	14	11	3	2	1	1	53	201
Eng.	48	15	26	17	44	22	17	3	4	1	149	568
Law	20	11	9	7	16	16	8	-	3	2	72	284
Med.	25	14	10	16	22	24	11	-	-	2	99	374
Pharm.	18	3	3	2	8	10	3	1	-	4	34	149
Physio.	1	1	1	1	2	-	1	-	-	-	6	20
Phys. Ed.	-	-	1	-	-	2	2	1	2	-	8	47
Science	77	34	39	30	48	30	15	3	6	-	205	703
Soc. St.	-	-	-	1	-	1	-	-	-	-	2	8
Tech.	32	12	9	11	17	15	8	1	2	-	75	277

Appendix 11. Table 2.

Hours of Sport and Exercise of Students

MALES. Third Term

Faculty	No sport	Hours of sport and exercise per week 1	2	3	4	5	6	7	8	9	Taking sport	Total Hours
Ag.Sc.	14	2	5	8	11	1	1	-	-	1	29	100
Arch.	6	3	6	2	3	-	1	-	-	-	15	39
Arts	18	7	11	10	9	1	2	-	-	1	41	121
Dent.	17	10	15	10	12	1	1	-	-	1	50	138
Econ.	22	3	10	11	14	3	2	-	-	2	45	157
Eng.	62	17	39	21	38	7	12	-	1	-	135	425
Law	21	7	14	10	24	4	6	1	4	1	71	265
Med.	35	11	15	18	27	9	7	-	1	1	89	307
Pharm.	18	2	7	4	15	2	1	1	1	1	34	128
Physio.	3	2	-	-	1	-	1	-	-	-	4	12
Phys.Ed.	-	-	2	-	4	-	1	-	1	-	8	34
Science	92	39	36	34	56	14	11	-	-	-	190	573
Soc.St.	-	-	1	1	-	-	-	-	-	-	2	5
Tech.	40	9	13	18	18	2	4	1	1	1	67	219

Appendix II. Table 3.

Hours of Sport and Exercise of Students.

MALES. Pre-examination Vacation and Examination.

Faculty	No sport	Hours of sport and exercise per week 1	2	3	4	5	6	7	8	9	Taking Sport	Total Hours
Ag.Sc.	21	-	6	7	7	2	-	-	-	-	22	71
Arch.	11	1	5	-	3	-	1	-	-	-	10	29
Arts	27	8	12	4	3	1	3	1	-	-	32	86
Dent.	32	10	13	4	6	-	1	-	-	1	35	87
Econ.	31	5	12	8	7	1	2	-	-	1	36	107
Eng.	98	14	39	16	22	1	6	-	1	-	99	277
Law	34	7	13	12	20	5	1	-	-	-	58	180
Med.	49	16	17	13	16	5	6	-	1	1	75	231
Pharm.	31	3	5	2	9	1	-	-	-	1	21	69
Physio.	5	-	-	-	1	-	1	-	-	-	2	9
Phys. Ed.	1	-	3	-	2	-	1	-	1	-	7	25
Science	141	23	44	30	31	6	7	-	-	-	141	397
Soc.St.	-	-	1	-	-	1	-	-	-	-	2	7
Tech.	60	5	15	17	8	1	-	1	-	-	47	130

Appendix 11. Table 4.

Hours of Sport and Exercise of Students.

MALES. Long Vacation.

Faculty	No sport	Hours of sport and exercise per week 1	2	3	4	5	6	7	8	9	Taking Sport	Total Hours
Ag.Sc.	3	-	2	2	6	6	13	1	9	1	40	230
Arch.	3	-	1	3	4	-	5	-	5	1	19	106
Arts	9	1	3	3	12	5	14	-	8	4	50	273
Dent.	1	1	4	3	15	5	19	-	16	3	66	372
Econ.	9	-	4	3	2	3	24	1	17	4	58	363
Eng.	22	3	15	10	36	9	50	6	42	4	175	966
Law	2	-	4	3	9	6	32	2	26	8	90	569
Med.	10	1	8	10	19	9	36	1	26	4	114	635
Pharm.	4	1	1	4	8	3	11	-	17	3	48	291
Physio.	-	-	-	-	2	-	2	-	3	-	7	44
Phys.Ed.	-	-	-	-	1	-	-	-	5	2	8	62
Science	34	8	13	18	51	24	67	3	59	5	248	1,353
Soc.St.	-	-	-	-	-	1	-	-	1	-	2	13
Tech.	6	2	3	9	19	2	36	1	27	2	101	578

Appendix 11. Table 5.

Hours of Sport and Exercise of Students.

FEMALES. First Term.

Faculty	No sport	Hours of sport and exercise per week 1	2	3	4	5	6	7	8	9	Taking Sport	Total Hours
Ag.Sc.	1	-	1	-	-	1	-	-	-	-	2	7
Arch.	1	-	2	2	2	1	-	-	-	-	7	23
Arts	26	13	26	14	29	8	4	-	5	-	99	327
Dent.	3	1	2	1	3	2	1	-	-	-	10	36
Econ.	3	-	-	1	2	-	-	-	-	-	3	11
Law	6	-	6	3	3	-	2	-	1	-	15	53
Med.	7	1	3	3	2	2	-	-	-	-	11	34
Music	3	1	1	1	1	-	1	-	-	-	5	16
Pharm.	4	1	2	2	5	-	-	1	-	-	11	38
Physio.	4	5	4	6	7	1	1	-	-	1	25	79
Phys. Ed.	-	-	-	-	2	-	1	-	-	2	5	32
Science	22	16	9	10	14	8	5	-	2	-	64	206
Soc.St.	3	1	3	6	10	3	1	-	1	-	26	103
Tech.	1	-	2	2	-	-	1	-	-	-	5	16

Appendix II. Table 6.

Hours of Sport and Exercise of Students

FEMALES. Second Term.

Faculty	No sport	Hours of sport and exercise per week 1	2	3	4	5	6	7	8	9	Taking sport	Total Hours
Ag.Sc.	2	-	-	-	-	1	-	-	-	-	1	5
Arch.	4	-	1	-	1	2	-	-	-	-	4	16
Arts	40	21	18	14	20	7	3	-	2	-	85	248
Dent.	5	1	1	2	2	2	-	-	-	-	8	27
Econ.	4	-	-	-	1	1	-	-	-	-	2	9
Law	6	2	5	2	5	-	1	-	-	-	15	44
Med.	9	3	3	1	1	1	-	-	-	-	9	21
Music	4	2	1	-	1	-	-	-	-	-	4	8
Pharm.	4	1	2	3	3	1	1	-	-	-	11	37
Physio.	6	8	1	3	9	-	1	-	-	1	23	72
Phys.Ed.	-	-	1	-	1	-	1	-	1	1	5	29
Science	26	15	15	9	16	4	-	1	-	-	60	163
Soc.St.	8	4	6	7	2	1	1	-	-	-	21	56
Tech.	1	-	1	3	-	1	-	-	-	-	5	16

Appendix 11. Table 7.

Hours of sport and Exercise of students.

FEMALES. Third Term.

Faculty	No sport	Hours of sport and exercise per week 1	2	3	4	5	6	7	8	9	Taking sport.	Total Hours
Ag.Sc.	1	-	1	1	-	-	-	-	-	-	2	5
Arch.	2	-	2	-	4	-	-	-	-	-	6	20
Arts	39	12	22	18	27	4	2	-	1	-	86	258
Dent.	6	-	2	3	2	-	-	-	-	-	7	19
Econ.	4	-	-	1	1	-	-	-	-	-	2	7
Law	6	3	4	3	5	-	-	-	-	-	15	40
Med.	10	2	4	1	1	-	-	-	-	-	8	17
Music	4	2	1	1	-	-	-	-	-	-	4	7
Pharm.	4	3	2	1	4	-	-	1	-	-	11	33
Physic.	12	2	2	4	8	1	-	-	-	-	17	55
Phys.Ed.	-	-	1	-	1	1	1	-	-	1	5	26
Science	31	18	7	14	13	1	2	-	-	-	55	143
Soc.St.	3	4	6	5	8	2	-	-	1	-	26	81
Tech.	4	-	-	1	1	-	-	-	-	-	2	7

Appendix 11. Table 8.

Hours of Sport and Exercise of Students.

FEMALES. Pre-examination Vacation and Examinations.

Faculty	No sport	Hours of sport and exercise per week 1	2	3	4	5	6	7	8	9	Taking sport	Total hours
Ag.Sc.	1	-	1	1	-	-	-	-	-	-	2	5
Arch.	4	-	2	-	2	-	-	-	-	-	4	12
Arts	56	15	24	10	19	1	-	-	-	-	69	174
Dent.	9	-	1	2	1	-	-	-	-	-	4	12
Econ.	4	-	1	1	-	-	-	-	-	-	2	5
Law	10	5	2	-	4	-	-	-	-	-	11	25
Med.	13	1	3	1	-	-	-	-	-	-	5	10
Music	4	1	2	1	-	-	-	-	-	-	4	8
Pharm.	6	2	3	-	3	-	-	1	-	-	9	27
Physio.	17	-	1	4	6	1	-	-	-	-	12	43
Phys.Ed.	1	-	-	-	2	1	-	-	-	1	4	22
Science	43	11	14	9	8	-	1	-	-	-	43	104
Soc.St.	10	3	7	4	5	-	-	-	-	-	19	49
Tech.	3	1	1	1	-	-	-	-	-	-	3	6

Appendix II. Table 9.

Hours of Sport and Exercise of Students.

FEMALES. Long vacation.

Faculty	No sport	Hours of sport and exercise per week. 1	2	3	4	5	6	7	8	9	Taking sport	Total hours
Ag.Sc.	-	-	-	3	-	-	-	-	-	-	3	9
Arch.	1	-	-	-	1	1	5	-	-	-	7	39
Arts	5	6	6	10	24	13	35	1	24	1	120	627
Dent.	2	-	2	-	1	2	4	-	2	-	11	58
Econ.	1	-	1	-	2	-	2	-	-	-	5	22
Law	3	-	-	1	2	1	9	1	4	-	18	109
Med.	2	-	2	-	4	1	7	1	1	-	16	82
Music	1	-	1	1	1	-	4	-	-	-	7	33
Pharm.	1	-	-	-	4	1	7	-	2	-	14	81
Physio.	2	1	-	1	6	-	14	-	4	1	27	153
Phys.Ed.	-	-	-	-	-	-	2	-	-	3	5	39
Science	6	1	3	10	18	6	27	1	13	1	80	421
Soc.St.	2	-	2	-	4	1	14	1	4	1	27	157
Tech.	-	-	-	-	3	-	3	-	-	-	6	30

Appendix II. Table 10.

APPENDIX 12.

Type of Relaxation at Week-ends.

In the following tables for Male and Female Students, the following abbreviations are made concerning relaxation -

(0) Nil.
(1) Art, Drama.
(2) Music, Singing.
(3) Photography.
(4) Chess.
(5) Reading.
(6) Radio.
(7) Television.
(8) Church.
(9) Youth work.
(10) Fishing.
(11) Others - Films and Dancing.

Type of Relaxation at week-ends.

MALES.

Faculty	Type of Relaxation 0	1	2	3	4	5	6	7	8	9	10	11	Total	No. in Faculty
Ag.Sc.	(1)	3	5	2	2	15	7	23	4	8	-	17	86	43
Arch.	-	3	6	-	-	8	1	8	2	4	-	5	37	21
Arts.	-	2	17	-	7	30	3	27	11	9	-	30	136	59
Dent.	(1)	2	14	1	1	24	5	41	8	11	-	27	134	67
Econ.	(1)	1	13	1	4	22	3	49	3	7	-	25	128	67
Eng.	(4)	5	46	6	5	74	15	120	16	39	-	77	402	197
Law	-	6	20	1	4	42	5	57	6	15	-	42	198	92
Med.	(1)	3	33	2	2	57	10	73	20	22	-	25	248	124
Pharm.	-	3	12	4	-	14	3	39	3	11	-	16	105	52
Physio.	-	1	1	-	-	4	-	4	-	2	-	3	15	7
Phys.Ed.	-	-	2	-	-	4	1	4	-	2	-	7	20	8
Science	(2)	10	63	7	18	109	23	176	37	53	-	80	576	282
Soc.St.	-	-	-	-	-	-	-	2	-	-	-	1	3	2
Tech.	(3)	-	24	2	4	35	15	70	5	23	1	34	213	107
Total	13	39	256	26	47	438	91	693	114	206	1	389	2,300	1,128

Appendix 12. Table 1.

Type of relaxation at week-ends.

FEMALES.

Faculty	Type of relaxation 0	1	2	3	4	5	6	7	8	9	10	11	Total	No. in Faculty
Ag.Sc.	(1)	-	-	-	-	2	-	2	1	-	-	-	5	3
Arch.	-	4	1	-	-	6	-	2	1	-	-	-	14	8
Arts	(1)	30	43	2	-	73	1	65	15	23	-	44	296	125
Dent.	-	3	3	-	-	7	-	5	3	3	-	9	33	13
Econ.	-	3	2	-	-	3	-	5	-	-	-	2	15	6
Law	-	4	10	-	1	12	-	8	-	2	-	12	49	21
Med.	-	3	11	-	-	8	-	5	7	5	-	4	43	18
Music	-	2	7	-	-	-	2	5	1	-	-	2	19	8
Pharm.	-	6	4	-	-	6	2	8	1	5	-	1	31	15
Physio.	(1)	5	9	-	-	18	2	13	4	5	-	9	65	29
Phys.Ed.	-	-	2	-	-	3	1	2	-	2	-	3	13	5
Science	(1)	18	25	1	-	46	1	44	13	29	-	22	199	86
Social St.	-	6	8	1	-	16	2	15	2	9	-	15	74	29
Tech.	-	2	3	-	-	3	1	2	1	1	-	2	15	6
Total	(4)	86	128	4	1	203	10	181	49	84	-	125	871	372

Appendix 12. Table 2.

APPENDIX 13A.

HEIGHTS

Mc.L.S.

Height	Area of Birth AA	FH	FW	SS	EE	Total	OO	Sub.	Grant Total
60¾"	1	-	-	-	-	1	-	-	1
61¼"	2	-	-	-	-	2	-	-	2
62"	-	-	-	-	-	0	-	1	1
63¼"	1	-	-	-	-	1	-	-	1
63½"	-	1	-	-	-	1	-	-	1
63¾"	-	-	-	2	-	2	-	1	3
64"	-	-	-	-	-	0	-	3	3
64¼"	1	-	-	-	-	1	1	2	4
64½"	1	-	-	-	-	1	-	1	2
65"	2	-	-	1	-	3	-	-	3
65¼"	1	-	-	1	-	2	-	2	4
65½"	3	-	-	1	-	4	-	-	4
65¾"	4	1	-	-	-	5	-	4	9
66"	5	1	1	1	-	8	-	5	13
66¼"	6	-	1	1	-	8	-	3	11
66½"	7	-	-	2	-	9	1	-	10
66¾"	9	1	-	1	-	11	-	1	12
67"	13	1	1	1	-	16	2	7	25
67¼"	10	1	2	2	-	15	-	1	16
67½"	17	4	3	1	-	25	-	2	27
67¾"	8	1	-	-	-	9	1	6	16
68"	23	2	-	2	1	28	2	3	33
68¼"	18	1	4	2	-	25	2	3	30
68½"	16	4	3	1	1	25	-	4	29
68¾"	23	1	3	3	-	30	1	3	34
69"	23	2	7	1	-	33	1	5	39
69¼"	17	2	5	3	-	27	1	-	28
69½"	40	6	5	3	-	54	1	1	57
69¾"	22	7	3	-	-	32	1	2	35
70"	40	10	5	1	-	56	1	4	61
70¼"	19	1	3	-	-	23	1	1	25
70½"	35	5	4	3	1	48	-	3	51
70¾"	29	5	3	-	-	37	-	2	39
71"	28	4	1	1	1	35	2	1	38
71¼"	30	5	-	2	-	37	1	-	38
71½"	22	1	2	1	1	27	-	1	28
71¾"	26	6	3	-	-	35	-	-	35
72"	43	3	8	-	1	55	-	1	56
72¼"	16	2	6	1	-	25	1	-	26
72½"	32 (DN 1)	3	2	-	1	39	-	1	40
72¾"	30	2	1	1	-	34	-	-	34
73"	22	3	3	-	-	28	-	-	28
73¼"	23	1	2	-	-	26	-	-	26
73½"	17	1	4	-	-	22	-	-	22
73¾"	16	-	2	-	-	18	-	-	18

HEIGHTS.

MALES.

Height	Area of Birth								Grand Total
	AA	BB	EW	ES	EE	Total	OO	SEA	
74"	20	-	2	-	-	22	-	-	22
74¼"	14	-	-	-	1	15	1	-	16
74½"	8	-	-	-	1	9	-	-	9
74¾"	13	-	-	-	-	13	-	-	13
75"	6	-	-	1	-	7	-	-	7
75¼"	2	-	-	-	-	2	-	-	2
75½"	9	1	2	-	-	12	-	-	12
75¾"	2	-	-	-	-	2	-	-	2
76"	6	-	1	-	-	7	-	-	7
76¼"	3	-	-	-	-	3	-	-	3
76½"	4	-	1	-	-	5	-	-	5
77"	3	1	1	-	-	5	-	-	5
77¼"	1	-	-	-	-	1	-	-	1
77½"	1	-	-	-	-	1	-	-	1
78"	2	-	1	-	-	3	-	-	3
78¾"	1	-	-	-	-	1	-	-	1
80"	1	-	-	-	-	1	-	-	1
	797 (BN-1)	90	95	40	10	1,033	21	74	1,128

Appendix 13A. Table 1A.

HEIGHTS.

FEMALES.

Height	Area of Birth AA	BB	BW	BS	BE	Total	OO	CEA	Grand Total
59"	1	-	-	-	-	1	-	-	1
59½"	1	-	-	-	-	1	-	-	1
59½"	1	-	1	-	-	2	-	1	3
60"	1	-	-	-	-	1	-	-	1
60½"	2	-	-	-	-	2	-	-	2
60½"	2	2	-	-	-	4	-	-	4
61"	4	-	1	-	-	5	-	-	5
61½"	3	-	-	-	-	3	-	2	5
61½"	5	-	1	-	-	6	-	-	6
61½"	7	-	-	1	-	8	-	-	8
62"	6	2	-	2	1	11	-	3	14
62½"	5	-	1	-	-	6	1	-	7
62½"	7	2	2	-	-	11	-	-	11
62½"	5	1	2	-	-	8	1	1	8
63"	9	1	1	-	-	11	-	1	12
63½"	8	1	1	1	-	11	-	-	11
63½"	11	2	2	1	1	17	-	-	17
63½"	2	-	2	-	-	4	-	-	4
64"	10	1	1	-	1	13	-	-	13
64½"	11 (BN-1)	5	2	-	-	19	-	-	19
64½"	17	1	1	-	-	19	-	1	20
64½"	13	-	1	1	-	15	-	1	16
65"	20	1	1	-	-	22	1	2	25
65½"	11	3	-	-	-	14	-	-	14
65½"	14	1	5	-	-	20	-	-	20
65½"	10	-	-	-	-	10	-	-	10
66"	11	4	2	1	-	18	-	-	18
66½"	9	2	-	-	-	11	-	-	11
66½"	11	-	2	-	-	13	-	-	13
66½"	3	-	1	-	-	4	-	-	4
67"	14	-	-	-	-	14	-	-	14
67½"	7	-	1	-	-	8	1	-	9
67½"	6	-	1	-	-	7	-	-	7
67½"	6	1	1	-	-	8	-	-	8
68"	7	-	-	-	-	7	-	-	7
68½"	1	1	1	-	-	3	1	-	4
68½"	3	1	1	-	-	5	-	-	5
68½"	2	-	-	-	-	2	-	1	3
69"	3	-	-	-	-	3	-	-	3
69½"	3	1	-	-	-	4	-	-	4

HEIGHTS.

FEMALES.

Height	Area of Birth AA	DB	EW	ES	EE	Total	OO	SEA	Grand Total
70"	1	-	-	-	-	1	-	-	1
70½"	-	-	1	-	-	1	-	-	1
70½"	1	-	1	-	-	2	-	-	2
73½"	1	-	-	-	-	1	-	-	1
	275 (DN-1)	33	37	7	3	356	4	12	372

Appendix 13A. Table 1B.

APPENDIX 13B.

WEIGHTS

MALES.

Weight	AA	Area of Birth BB	DW	ES	EE	Total	OO	SEA	Grand Total
94 lbs.	1	-	-	-	-	1	-	-	1
100 "	-	-	-	-	-	0	-	1	1
108 "	1	-	-	-	-	1	-	1	2
109 "	-	-	-	-	-	0	-	1	1
110 "	3	-	-	-	-	3	-	-	3
111 "	-	-	-	-	-	0	-	1	1
112 "	3	1	-	-	-	4	-	-	4
113 "	-	1	-	-	-	1	-	1	2
116 "	2	1	-	-	-	3	-	1	4
117 "	-	1	-	-	-	1	-	2	3
118 "	2	-	-	-	-	2	-	2	4
119 "	1	-	-	-	-	1	-	-	1
120 "	9	2	1	-	-	11	1	7	19
121 "	4	1	1	-	-	6	-	4	10
122 "	3	-	-	-	-	3	-	3	6
123 "	6	1	-	-	-	7	1	1	9
124 "	6	1	-	-	-	7	-	1	8
125 "	3	-	1	-	-	4	1	-	5
126 "	9	1	-	1	-	11	-	4	15
127 "	8	1	-	-	-	9	1	-	10
128 "	2	-	1	2	-	5	1	4	10
129 "	7	1	1	1	-	10	-	1	11
130 "	7	3	1	1	-	12	-	2	14
131 "	12	3	1	-	-	16	-	-	16
132 "	10	1	-	1	-	12	-	-	12
133 "	7	1	-	1	-	9	-	3	12
134 "	11	1	2	2	-	16	1	3	20
135 "	10	2	-	-	-	12	-	1	13
136 "	10	3	3	1	-	17	1	1	19
137 "	16	1	1	-	-	18	1	-	19
138 "	18	5	-	-	-	23	1	2	26
139 "	7	-	-	1	-	8	-	1	9
140 "	42	5	7	6	-	60	3	9	72
141 "	12	1	2	1	1	17	1	-	18
142 "	19	1	4	-	1	25	1	1	27
143 "	16	3	2	-	1	22	-	2	24
144 "	15	-	6	1	-	22	2	-	24
145 "	23	2	3	1	-	29	-	1	30
146 "	18	3	2	3	-	26	-	2	28
147 "	22	1	1	1	-	25	1	-	26
148 "	16	3	4	-	-	23	-	1	24
149 "	16	1	1	-	-	18	-	1	19
150 "	27	2	2	-	-	31	1	3	35
151 "	16	3	2	-	-	21	-	-	21
152 "	27	3	2	-	-	32	-	-	32

WEIGHTS.

MALES.

Weight	AA	Area of Birth BB	BW	BS	BE	Total	OO	SEA	Grand Total
153 lbs.	12	4	1	-	-	17	-	-	17
154 "	23	2	2	-	-	27	1	1	29
155 "	9	2	1	-	1	13	-	-	13
156 "	10	3	1	4	1	19	-	-	19
157 "	13	1	-	3	-	17	-	-	17
158 "	21	2	3	-	-	26	-	-	26
159 "	7	1	2	1	-	11	-	-	11
160 "	38	4	4	2	1	49	-	1	50
161 "	8	-	2	1	-	11	-	-	11
162 "	15	1	2	1	1	20	-	1	21
163 "	12	1	1	-	-	14	-	-	14
164 "	13	-	3	-	1	17	1	-	18
165 "	7	-	2	-	-	9	-	-	9
166 "	8	1	2	1	-	12	-	-	12
167 "	12	-	1	-	-	13	-	-	13
168 "	12	-	1	-	1	14	-	-	14
169 "	10	-	-	-	-	10	-	-	10
170 "	14	-	2	1	-	17	-	-	17
171 "	10	-	-	-	-	10	-	-	10
172 "	7	-	-	-	1	8	1	-	9
173 "	7	2	2	-	-	11	-	-	11
174 "	5	1	3	-	-	9	-	-	9
175 "	5	1	-	1	-	7	-	-	7
176 "	8 (BN-1)	1	1	-	-	10	-	-	10
177 "	6	-	1	-	-	7	-	-	7
178 "	1	-	-	-	-	1	-	-	1
179 "	5	-	-	-	-	5	-	1	6
180 "	11	-	3	-	-	14	-	-	14
181 "	2	-	-	-	-	2	-	1	3
182 "	4	-	-	-	-	4	-	-	4
183 "	4	-	-	-	-	4	-	-	4
184 "	2	-	-	-	-	2	-	-	2
185 "	3	-	-	-	-	3	-	-	3
186 "	4	-	1	-	-	5	-	-	5
187 "	2	-	-	-	-	2	-	-	2
188 "	1	-	1	-	-	2	-	-	2
189 "	2	-	-	-	-	2	-	-	2
190 "	1	-	-	-	-	1	-	1	2
192 "	3	-	-	-	-	3	-	-	3
193 "	1	-	-	-	-	1	-	-	1
194 "	-	1	2	-	-	3	-	-	3
196 "	1	-	-	-	-	1	-	-	1
198 "	1	-	-	-	-	1	-	-	1
199 "	3	-	-	-	-	3	-	-	3

WEIGHTS.

MALES.

Weight	AA	Area of Birth BB	EN	ES	EE	Total	OO	SEA	Grand Total
200 lbs.	2	1	-	-	-	3	-	-	3
201 "	1	-	-	-	-	1	-	-	1
204 "	1	-	-	-	-	1	-	-	1
207 "	1	-	-	-	-	1	-	-	1
209 "	1	-	-	-	-	1	-	-	1
210 "	1	-	-	1	-	2	-	-	2
219 "	-	1	-	-	-	1	-	-	1
220 "	1	-	-	-	-	1	-	-	1
281 "	1	-	-	-	-	1	-	-	1
	797 (BN-1)	90	95	40	10	1,033	21	74	1,128

Appendix 13B. Table 1.

WEIGHTS.

FEMALES.

Weight	AA	Area of Birth				Total	OO	SEA	Grand Total
		BB	BW	BS	EE				
81 lbs.	1	-	-	-	-	1	-	-	1
84 "	1	-	-	-	-	1	-	-	1
86 "	1	-	-	-	-	1	-	-	1
88 "	1	-	-	-	-	1	-	-	1
89 "	-	-	-	-	-	0	-	1	1
92 "	1	-	1	-	-	2	-	1	3
94 "	1	-	-	-	-	1	-	-	1
95 "	1	-	-	-	-	1	-	-	1
96 "	1	-	-	-	-	1	-	1	2
97 "	-	-	-	-	-	0	-	1	1
100 "	6	-	-	-	-	6	-	2	8
101 "	1	-	-	-	-	1	-	-	1
102 "	3	-	-	-	1	4	-	-	4
103 "	2	-	-	-	-	2	-	-	2
104 "	1	-	-	-	-	1	-	-	1
105 "	2	-	-	-	-	2	-	-	2
106 "	3	-	-	1	-	4	-	1	5
107 "	4	-	1	-	-	5	-	-	5
108 "	1	-	-	-	-	1	-	-	1
109 "	5	-	-	-	-	5	-	-	5
110 "	6	-	-	-	-	6	-	1	7
111 "	1	-	-	-	-	1	-	-	1
112 "	5	1	-	-	-	6	-	1	7
113 "	8	3	-	-	-	11	2	-	13
114 "	8	-	-	-	-	8	-	-	8
115 "	3	2	-	-	-	5	-	-	5
116 "	6	-	2	-	-	8	-	-	8
117 "	6	-	1	-	-	7	-	-	7
118 "	5	-	3	-	-	8	-	1	9
119 "	5	1	1	-	-	7	-	-	7
120 "	14	5	4	1	-	24	-	-	24
121 "	2	-	2	-	-	4	-	-	4
122 "	5	1	2	-	-	8	-	-	8
123 "	12	1	1	-	-	14	-	-	14
124 "	4	1	-	-	-	5	-	-	5
125 "	10	-	1	-	-	11	-	-	11
126 "	10	2	1	-	-	13	-	-	13
127 "	4	1	-	-	1	6	-	-	6
128 "	5	2	2	1	-	10	-	-	10
129 "	9	2	-	-	-	11	-	-	11
130 "	7	2	2	-	-	11	-	-	11
131 "	3 (BN-1)	1	-	-	-	5	-	-	5
132 "	8	-	1	-	-	9	-	-	9
133 "	7	-	2	-	-	9	-	-	9

WEIGHTS.

FEMALES.

Weight	Area of Birth AA	BB	BE	BC	EE	Total	OO	SEA	Grand Total
134 lbs.	7	-	1	-	-	8	-	-	8
135 "	4	-	-	1	1	6	1	-	7
136 "	5	1	1	-	-	7	-	-	7
137 "	3	1	-	-	-	4	-	-	4
138 "	6	-	-	1	-	7	-	-	7
139 "	3	-	-	-	-	3	-	-	3
140 "	10	2	2	-	-	14	-	1	15
141 "	3	-	-	-	-	3	-	-	3
142 "	2	-	1	-	-	3	-	-	3
143 "	4	1	1	-	-	6	-	-	6
144 "	1	-	-	-	-	1	-	-	1
145 "	2	-	-	1	-	3	1	-	4
146 "	2	1	-	-	-	3	-	-	3
147 "	2	-	-	-	-	2	-	-	2
148 "	3	-	1	-	-	4	-	-	4
149 "	3	-	-	-	-	3	-	-	3
150 "	5	-	-	-	-	5	-	-	5
151 "	3	-	-	-	-	3	-	-	3
152 "	4	-	-	-	-	4	-	-	4
153 "	1	-	-	1	-	2	-	-	2
154 "	1	-	-	-	-	1	-	-	1
155 "	1	-	-	-	-	1	-	-	1
156 "	1	-	-	-	-	1	-	-	1
158 "	1	-	-	-	-	1	-	-	1
159 "	-	-	1	-	-	1	-	-	1
160 "	3	-	-	-	-	3	-	-	3
161 "	1	-	-	-	-	1	-	-	1
162 "	-	-	1	-	-	1	-	-	1
163 "	1	-	-	-	-	1	-	-	1
164 "	1	-	-	-	-	1	-	-	1
165 "	1	-	-	-	-	1	-	-	1
166 "	1	-	-	-	-	1	-	-	1
169 "	1	-	-	-	-	1	-	-	1
170 "	-	-	-	-	-	0	-	1	1
172 "	-	1	-	-	-	1	-	-	1
194 "	-	-	1	-	-	1	-	-	1
229 "	1	-	-	-	-	1	-	-	1
	275 (BN-1)	33	37	7	3	356	4	12	372

Appendix 13B. Table 2.

APPENDIX 14.

Pulse Rate of Students.

Pulse	Males	Females	Total
130	1	1	2
128	-	1	1
124	1	1	2
120	11	-	11
116	1	-	1
112	8	2	10
110	1	1	2
108	8	2	10
104	1	-	1
102	-	1	1
100	24	16	40
98	-	1	1
96	30	18	48
94	1	2	3
92	16	9	25
90	14	3	17
88	22	11	33
86	1	2	3
84	57	22	79
82	4	3	7
80	122	46	168
78	13	8	21
76	96	34	130
74	20	5	25
72	173	77	250
70	31	13	44
68	128	25	153
66	18	5	23
64	128	41	169
62	13	2	15
60	79	12	91
58	14	-	14
56	41	6	47
54	24	1	25
52	14	1	15
50	3	-	3
48	6	-	6
46	2	-	2
44	2	-	2
	1,128	372	1,500

APPENDIX 15.

Appendix 15A. Functional Murmurs.

Type of murmur.	Males	Females	Comments
Mitral systolic - lying only.	41	9	5 males and 2 females did not take exercise. 1 male had been investigated by cardiac cathererization but no organic disease was found. No other discussion was made with these students about the findings.
Mitral systolic - sitting only	1	-	This student did not take exercise. The condition was not disclosed.
Mitral systolic - expiration only	2	-	Neither student took exercise. The condition was not disclosed.
Pulmonary systolic - lying only	20	3	10 males and 2 females took exercise. The condition was not disclosed.
Aortic systolic - lying only	3	-	All played sport. The condition was not disclosed.
Mitral and pulmonary systolic - lying only	7	2	One male did not take exercise. One male was referred to cardiologist who agreed that the murmur was functional.

Appendix 15A. Functional murmurs (cont)

Type of murmur.	Males	Females	Comment
Mitral and aortic systolic - lying only	2	-	One student played no sport. He was reviewed in 3 months and the state had not altered. The other student was not informed.
Pulmonary and aortic systolic - lying only	3	2	One female did not play sport. The condition was not disclosed.
Mitral, pulmonary and aortic systolic - lying only	1	-	This student played sport. He was not informed, but the examiner had the opportunity to re-examine the student in 6 months when a similar finding was noted.
Tricuspid murmur - lying only	1	-	This student had a slurring of the first sound only which disappeared on sitting. He played no sport, and the condition was not disclosed.
Total functional murmurs	81	16	Total - 97

APPENDIX. 2. THE UNIVERSITY OF ADELAIDE

12.

Diploma in Physical Education

Record Sheet for Medical and Physical Examinations

SURNAME..... Date of Birth.....
IN BLOCK LETTERS DAY MONTH YEAR

CHRISTIAN NAMES..... Sex.....

ADDRESS..... Telephone No.....

.....

If living, show age and state of health of the following:	AGE	STATE OF HEALTH	IF DEAD	CAUSE OF DEATH	AGE AT DEATH
Father - -			Father - -		
Mother - -			Mother - -		
Brothers -			Brothers -		
Sisters - -			Sisters - -		

Has there been any (a) consumption (b) rheumatism (c) asthma (d) recurring bronchitis (e) gout (f) cancer (g) fits or insanity or any other nervous condition in any member of your family?.....

If so, give particulars.....

Have you ever suffered from

1. (a) fits of any kind (b) sunstroke (c) spitting of blood (d) pleurisy (e) influenza (f) persistent cough?.....

   If influenza, state frequency.

2. (a) palpitation (b) fainting (c) disease of the heart (d) or any disease in lungs (e) or any infection of the kidneys or the bladder (f) stricture?.....

3. (a) any affection of stomach, liver or bowels (b) piles (c) rupture?.....

4. minor ailments such as (a) coughs (b) colds (c) sore throats (d) catarrh, etc.....

   If so, state frequency.....

5. discharge from ears, earache, or deafness?.....

6. any fevers, malaria, or other tropical diseases?.....

Have you ever had any infectious disease, scarlatina, diphtheria, typhoid, etc.?.....

Have you had any accident or surgical operation?.....

Have you ever been rejected or remanded for life insurance or for any form of employment on account of health?.....

Have you suffered from any illness other than those mentioned?.....

If so, give particulars.....

Have you been vaccinated or immunized against any disease?.....

If so, give particulars.....

Are you in good health now?.....

When were you last under medical treatment?.....

Do you smoke?..... Do you drink alcohol?.....

How much?..... What kind?.....

Pipe or cigarettes?..... How much?.....

Are you living at home or away?.....

If away, state period.....

Personal Athletic and Sporting History (Sports previously played, etc.).....

The information contained in this form may be made available for University record purposes.

NOTE. The above portion of this form is to be filled in, but not signed by the student before presenting himself or herself for examination. The signature is to be affixed in the presence of the examining Doctor.

Signature.....

Date.....

Signature of Examining Doctor.....

MEDICAL EXAMINATIONS

TESTS	Date			
1. Eyes				
(1) spectacles				
(2) type of lenses				
(3) lids				
(4) visual acuity				
a. Distant; Right				
Left				
b. Near; Right				
Left				
Convergence test				
Fields, Right				
Left				
Nystagmus				
2. Hearing				
(1) right				
(2) left				
(3) wax, etc.				
(4) discharge				
(5) mastoid region				
3. Nose				
septum				
turbinates				
sinuses				
atrophic rhinitis				
polyps				
4. Tonsils				
adenoids				
5. Teeth				
6. Glands (lymphatic)				
7. Mouth, Breathing				
8. Heart				
(1) position				
(2) size				
(3) sounds				
(4) frequency				
(5) character				
(6) other tests				
9. Lungs				
Other tests				
10. Abdomen				
11. Urine				
(1) S.G.				
(2) sugar				
(3) albumen				

TESTS	Date			
11a. Abnormalities				
(1) Palate				
(2) Thyroid				
(3) Hernia				
(4) Varicocele				
(5) Undescended testicles				
(6) Varicose veins				
(7) Others				
11b. Uterine function				
Dysmenorrhoea				
Incapacity				
Regularity				
12. Reflexes				
(1) Knee				
(2) Plantar				
(3) Pupil:				
a. light				
b. accommodation				
Muscle Tone				
contracted				
Arms, Right				
Left				
Chest				
Legs, Right				
Left				
relaxed				
Arms, Right				
Left				
Chest				
Legs, Right				
Left				
Deformities or paralyses				
Movement of Joints				
(1) Range				
(2) Flexibility				
(3) Spasms				
13. Tremors				
14. Skin				
15. General impression of ductless glands				
16. Other tests				
.....				
.....				
.....				
Initials of Examining Doctor..				

Result of X-Ray Examination

Speech and General Appearance

Posture (from photographs)

1. General impression of posture.....

.....

.....

2. Feet.....

3. Other details.....

PHYSIOLOGICAL TESTS

TESTS — Date					TESTS — Date				
Sitting					Flarimeter test				
Pulse					No. secs.				
Systolic					Max. systolic				
Diastolic					After ¼ min.				
Touch toes 12 times					Pulse				
Pulse over 5-second periods 0–5					Systolic				
5–10					Diastolic				
10–15					After 2¼ min.				
15–20					Pulse				
20–25					Systolic				
25–30					Diastolic				
30–35					Holding 40 mm. mercury				
Rest					No. secs.				
Pulse					Other tests				
Systolic									
Diastolic									
Exercise tolerance test									
No. of times over steps, time taken (standard									
Pulse									
Systolic									
Diastolic					Initials of Examiner				

PHYSICAL EXAMINATION

TESTS AND MEASUREMENTS — Date								
Sitting height								
Standing height								
Weight								
Arm span								
Chest, Maximum								
Minimum								
Expansion								
Waist								
Hips								
Calf, Right								
Left								
Ankle, Right								
Left								
Dynamometer, Right								
Left								
Self-balancing test								
Right foot								
Left foot								
Balancing Rod test								
Right hand								
Left hand								
Other tests and measurements								
1.								
2.								
3.								
4.								
5.								
Initials of Examiner								

General summary of Medical and Physiological Examinations:

.....

.....

Recommendations concerning:

(a) Re-examinations .....

(b) Treatment .....

(c) Participation in physical activities.....

SCHOLASTIC RESULTS (Status, Certificates, etc.)

SURNAME..... Date of Birth.....
IN BLOCK LETTERS DAY MONTH YEAR

CHRISTIAN NAMES..... Sex.....

ADDRESS..... Telephone No.....

.....

YEAR	SUBJECTS ENTERED FOR	RESULT	YEAR	SUBJECTS ENTERED FOR	RESULT

SPORTING AND OTHER ACTIVITIES DURING TRAINING.

APPENDIX. 3.

No.

ADELAIDE UNIVERSITY UNION

HEALTH SERVICE

Record Sheet for Medical and Physical Examinations

5-7. SURNAME..... CHRISTIAN NAMES.....

HOME ADDRESS..... ADDRESS DURING TERM.....

..... (Phone.....) ..... (Phone.....)

8-9. Date of Birth..... Family Doctor.....

12. Sex: Male/Female 10-11. Present Age.....years

Australian Born: Yes/No 14. Married/Single; Widow/Widower

If not, state nationality..... 17. Are you living (1) at home, (2) in a University College (3) in other accommodation?.....

13. Years in Australia..... 18. Year of Course.....

15-16. Faculty or Department..... 19. Year of Attendance.....

Are you a member of the Adelaide Teachers' College? Yes/No 20. Are you the holder of a Scholarship or Bursary? Yes/No

20. Full Time/Part Time Student

21. If living, show age and state of health of the following:

	AGE	STATE OF HEALTH	IF DEAD	CAUSE OF DEATH	AGE AT DEATH
Father - -			Father -		
Mother - -			Mother -		
Brothers - -			Brothers -		
Sisters - -			Sisters -		

22. Has any member of your family suffered from (1) tuberculosis (2) rheumatism (3) chronic arthritis (4) hay fever (5) asthma (6) lung complaint (7) gout (8) cancer (9) fits or mental illness (10) high blood pressure? Yes/No.

If so, give particulars.....

Have you ever suffered from any of the following? If so, give dates if possible:

23. (1) spitting of blood (2) persistent cough (3) fits of any kind (4) pleurisy (wet or dry) (5) influenza (6) palpitation (7) fainting (8) disease of the heart (9) any disease in lungs.....

.....

24. (1) infection of the kidneys or the bladder.....

.....

(2) any affection of stomach, liver or bowels (3) piles (4) rupture.....

.....

minor ailments such as (5) coughs (6) colds (7) sore throats (8) catarrh (9) etc.....

If so, state frequency.....

25. (1) discharge from ears (2) earache (3) deafness.....

(4) any fevers (5) malaria or other (6) tropical diseases.....

Have you ever had any infectious disease?

(7) scarlatina (8) diphtheria (9) typhoid (26/1) German measles (2) etc.....

26. Have you had any (3) accident or (4) surgical operation?.....

Have you ever been rejected, deferred, or accepted at other than first class rates for life insurance? (5) Yes, (6) No. Or for any form of employment on account of health? (7) Yes, (8) No.

27. Have you suffered from any illness other than those mentioned? (9) Yes, (27/1) No.

If so, give particulars.....

Have you been vaccinated or immunized against any disease? (2) Yes, (3) No.

If so, give particulars.....

28. Do you smoke? (1) Occasionally, (2) Regularly, (3) No. Do you drink alcohol? (4) Occasionally, (5) Regularly, (6) No.

29. Do you take part in physical activity (sports, gymnastics, bush-walking, etc.)? (1) Regularly, (2) Occasionally, (3) No.

Other extra-curricula interests?.....

30. War Service? Yes/No. Any resulting disability? Yes/No.

When did you last consult a doctor and for what reason?.....

31. Present state of Health:.....

Signature of Student:.....

32. Signature of Examining Doctor:..... Date.....

The information contained in this form may be made available for University record purposes.

General								
Appearance	33							
Height	34							
Weight	34							
Chest inspiration (ins.)	35							
expiration (ins.)								
Abdomen (ins.)								
Bones, joints, muscles and spine	36							
Hernia, veins	37							
Feet	38							
Posture (Good, Fair, Poor)	39							
Respiratory System	40							
Circulatory System								
Heart	41							
Vessels (pulse)	42							
Blood pressure, systolic	43							
diastolic								
Digestive System								
Teeth	44							
Tongue	45							
Abdominal organs	46							
Genito-Urinatory System								
Urine	47							
Menstrual function	48							
Nervous System								
Pupils	49							
Reflexes	50							
Co-ordination	51							

Eyes								
Vision, Right { With glasses - 52 / Without glasses -								
Left { With glasses - / Without glasses -								
Diseases - - - - - - 53								
Colour Vision - - - - - 54								
Ears, Hearing: Right, Whisper - 55	..... ft.		..... ft.		..... ft.		..... ft.	
Left - - - -	..... ft.		..... ft.		..... ft.		..... ft.	
Nose - - - - - - - 56								
Throat - - - - - - - 57								

SPECIAL OBSERVATIONS

Tuberculosis				
Mantoux test - - - - - - 58				
X-ray, Chest - - - - - - 59				
Other Tests (Sputum, B.S.R., etc.) -				

Year	OTHER OBSERVATIONS AND RECOMMENDATIONS - - 60-61	Initials of Examining Doctor

FOLLOW-UP NOTES

Year	Illnesses or Accidents since last examination:
	(a) Suffered by Student:
	(b) Suffered by members of your family:
	(a) Suffered by Student:
	(b) Suffered by members of your family:
	(a) Suffered by Student:
	(b) Suffered by members of your family:
	(a) Suffered by Student:
	(b) Suffered by members of your family:

THE GRIFFIN PRESS

No...../6 APPENDIX. 5. CONFIDENTIAL

Previous Nos.:—

.....

.....

.....

THE UNIVERSITY OF ADELAIDE

STUDENT HEALTH SERVICE

Record Sheet for Medical and Physical Examinations

THE INFORMATION CONTAINED IN THIS FORM MAY BE MADE AVAILABLE FOR UNIVERSITY RECORD PURPOSES

A. GENERAL

Surname..... (BLOCK LETTERS) Other Names.....

Home Address..... 'Phone.....

Address During Term..... 'Phone.....

Date of Birth...../...../19..... Sex

Male [ ] M

Female [ ] F

Marital State

Married [ ] 3

Single [ ] 4

Widowed or Divorced [ ] 5

Country of Birth—Australia? Yes/No

(If "No," please specify.....) Nationality.....[ ]

Nature of Term Residence

At Home [ ] H

In a Flat [ ] F

In University College [ ] C

In Lodgings [ ] L

Attending Teachers' College: Yes [ ] T

No [ ]

Full Time [ ]

Part Time [ ]

Year of Course.....

Faculty or Department.....

B. FAMILY HISTORY

Member	Relationship (Please indicate if Brother or Sister)	Present Age, or Age at Death	Present state of Health (Place X if Dead)		Cause of Death if Applicable (See code immediately below)	Illnesses Suffered (See code immediately below)
Father						
Mother						
Others: 1st						
2nd						
3rd						
4th						
5th						

1. Allergies (Asthma, Hay Fever)
2. Cancer
3. Chronic Arthritis or Gout
4. Diabetes
5. Fits or Mental Illness
6. Heart Disease
7. High Blood Pressure
8. Lung Complaint
9. Peptic Ulcer
10. Rheumatism or Rheumatic Fever
11. Tuberculosis
12. Other Serious Complaints

Particulars:.....

C. IMMUNIZATION

Have you been vaccinated for Smallpox? Yes [ ] 1 No [ ]

Please insert a MARK in the relevant brackets if you have had injections for:

Diphtheria [ ] 2

Whooping Cough [ ] 3

Typhoid [ ] 4

Influenza [ ] 5

Cholera [ ] 6

Poliomyelitis [ ] 7 in year* 19.....

Tetanus [ ] 8 in year* 19.....

B.C.G. [ ] 9 in year* 19.....

D. PERSONAL HISTORY

1. Please mark appropriate square if you have suffered from:

Tuberculosis	[ ] 01	Palpitation	[ ] 17	Undiagnosed Fever	[ ] 31
Spitting of Blood	[ ] 02	Heart Disease	[ ] 18	Poliomyelitis	[ ] 32
Rheumatism	[ ] 03	Fits	[ ] 19	Glandular Fever	[ ] 33
Rheumatic Fever	[ ] 04	Nervous Break-down	[ ] 20	Encephalitis or Meningitis	[ ] 34
Asthma	[ ] 05	Stomach Trouble	[ ] 21	Mumps	[ ] 35
Hay Fever	[ ] 06	Liver Trouble	[ ] 22	Measles	[ ] 36
Sore Throat	[ ] 07	Bowel Complaint	[ ] 23	German Measles	[ ] 37
Frequent Colds	[ ] 08	Piles	[ ] 24	Whooping Cough	[ ] 38
Earache	[ ] 09	Rupture	[ ] 25	Scarlet Fever	[ ] 39
Ear Disease	[ ] 10	Kidney or Bladder Trouble	[ ] 26	Diphtheria	[ ] 40
Deafness	[ ] 11	Malaria	[ ] 27	Chicken Pox	[ ] 41
Chronic Cough	[ ] 12	Tropical Disease	[ ] 28	Tumour or new Growths	[ ] 42
Lung Complaint	[ ] 13	Typhoid	[ ] 29	Diabetes	[ ] 43
Pleurisy	[ ] 14	Dysentery	[ ] 30	Sports Injury	[ ] 44
Pneumonia	[ ] 15			Accident	[ ] 45
Fainting	[ ] 16				

Particulars:.....

2. Have you undergone the following Surgical Operations?
   Appendicectomy [ ] 50 Tonsillectomy [ ] 51 Other.....
   (Please State)
   .....[ ] 52

E. SOCIAL HISTORY

1. Have you been examined for Life Assurance?
   Yes, and Accepted [ ] 1 Yes, and Deferred [ ] 2 Yes, and Rejected [ ] 3 No [ ] 0
2. Do you Smoke? Yes [ ] .....Cigarettes per day. No [ ] 0
3. Do you drink Alcohol? Yes [ ] D No [ ] T
4. Do you take part in Physical Activities? Yes, at University [ ] Yes, private [ ] No [ ]
   If yes, please give details of sport..... [ ]
5. Have you extracurricular activities? Yes [ ] No [ ] Details.....
6. Present state of Health..... Date of last consulting your Doctor.....

F. ILLNESSES OR ACCIDENTS SINCE LAST EXAMINATION

(a) Suffered by student:

(b) Suffered by members of your family:

Signature of Student.....

Signature of Doctor..... Date.....

FOR OFFICE USE ONLY COMMENTS

P [ ]

M [ ]

Examiner..... [ ]

G. GENERAL MEDICAL EXAMINATION

1. General

(.....ins.)

Appearance..... [ ] Height.....cms. Weight.....lbs.

Chest Expiration.....ins. Expansion.....ins. Abdomen.....ins.

2. Eyes

Vision, Right with glasses 6/ Vision, Left with glasses 6/

without glasses 6/ without glasses 6/

Colour Vision

Normal [ ] N Green [ ] G Red [ ] R Red-Green [ ] F

Disease

Refractive error	[ ] 1	Hordeolum	[ ] 4	Allergic Conjunctivitis	[ ] 7
F.B.	[ ] 2	Blepharitis	[ ] 5	Squint	[ ] 8
Conjunctivitis	[ ] 3	Myopia	[ ] 6	Other.....	[ ] 9

3. Ears

Hearing, Right..... Hearing, Left.....

Disease

Otitis media	[ ] 1	Deafness	[ ] 4		
Otitis externa	[ ] 2	Wax	[ ] 5		
Otitis interna	[ ] 3	Other.....			[ ] 9

4. Nose and Throat

Epistaxis	[ ] 1	Cervical adenitis	[ ] 5	Tonsillitis	[ ] 8
Hay Fever	[ ] 2	Foreign Body in Throat	[ ] 6	Other.....	
Sinusitis	[ ] 3	Pharyngitis	[ ] 7	.....	[ ] 9

5. Respiratory System

Asthma	[ ] 1	Pneumonia	[ ] 4	Other.....	
Bronchitis	[ ] 2	Pneumothorax	[ ] 5	.....	[ ] 9
Pleurisy	[ ] 3	Pulmonary Tuberculosis	[ ] 6		

6. Circulatory System

Blood Pressure—Systolic.....Diastolic.....

Pulse..... A.B..... I.C.S..... ins. M S L [ ]

Disease

(1) Valvular

	Aortic	Pulmonary	Tricuspid	Mitral
Supine	[ ] 12	[ ] 1	[ ] 4	[ ] 7
Erect	[ ] 11	[ ] 2	[ ] 5	[ ] 8
Both	[ ] 0	[ ] 3	[ ] 6	[ ] 9

(2) Other

Interatrial defect	[ ] 1	Varicose Veins	[ ] 4	Thyrotoxicosis	[ ] 6
Interventricular defect	[ ] 2	Var. Veins + Coronary	[ ] 5	Anaemia	[ ] 7
Coronary disease	[ ] 3			Other.....	[ ] 9

7. Gastrointestinal System

a. Teeth

Caries	[ ] 1	Gingivitis	[ ] 3	Other.....	
False	[ ] 2	Impacted Wisdom Teeth	[ ] 4	.....	[ ] 9

b. Tongue

Furred	[ ] 1	Other.....	[ ] 9

c. Hernia

Umbilical	[ ] 1	Inguinal	[ ] 3	Other.....	
Femoral	[ ] 2			.....	[ ] 9

d. Abdomen

Liver palpable	[ ] 1	Dyspepsia	[ ] 4	Colitis	[ ] 7
Spleen palpable	[ ] 2	Peptic Ulcer	[ ] 5	Haemorrhoids	[ ] 8
Appendicitis	[ ] 3	Constipation	[ ] 6	Other.....	[ ] 9

8. Genito-Urinary System

Urine

Bile [ ] 1
Urobilinogen [ ] 2
Sugar [ ] 3
Albumen-organic disease [ ] 4
Albumen-orthostatic albuminuria [ ] 5
Normal [ ] 6
Other..... [ ] 9

Menstrual function

Interval.....days Duration.....days

Pain

none	DB	1st	2nd	3rd

[ ]

Code:

none	0	D.B., 1st	5
DB	1	1st, 2nd	6
1st	2	2nd, 3rd	7
2nd	3	D.B., 1st, 2nd	8
3rd	4	1st, 2nd, 3rd	9

Disease

Pyelitis [ ] 1
Cystitis [ ] 2
Urethritis [ ] 3
Balanitis [ ] 4
Varicocoele [ ] 5
Hydrocoele [ ] 6
Atrophied testis [ ] 7
Undescended testis [ ] 8
Other..... [ ] 9

9. Nervous System

Reflexes—K.J. S[ ] 0 +[ ] 1 ++[ ] 2 +++[ ] 3 ++++[ ] 4

Pupils..... Co-ordination.....

Cranial nerves.....

10. Skeletal System

a. Posture

Good [ ] 1
Fair [ ] 2
Poor [ ] 3

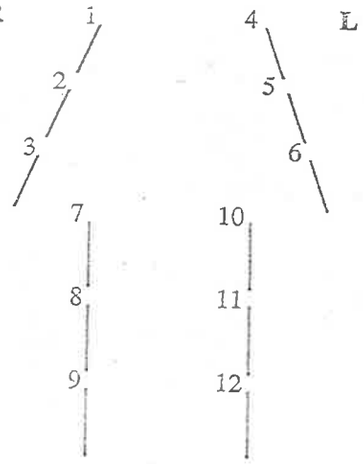
b. Spine and Thorax

Lordosis [ ] 1
Kyphosis [ ] 2
Lordosis Kyphosis [ ] 3
Scoliosis [ ] 4
Funnel Chest [ ] 5
Flattened Chest [ ] 6
Cervical Rib [ ] 7
Other.....
..... [ ] 9

c. Limbs and Muscles

Bow-legged [ ] 1
Knock-kneed [ ] 2
Pigeon-toed [ ] 3
Fibrositis [ ] 4
Old Polio [ ] 5
Other..... [ ] 9

d. Joints



Disease Code:

Osteo-arthritis	1
Rheumatoid-arthritis	2
Other	9

e. Feet

Flat [ ] 1
High Arch [ ] 2
Everted ankle [ ] 3
Hallux Valgus [ ] 4
Hammer toe [ ] 5
Callosities [ ] 6
Other..... [ ] 9

f. Hands

Clubbing [ ] 1
Nail-biting [ ] 2
Other..... [ ] 9

11. Skin Disorders

Acne [ ] 1
Allergy [ ] 2
Boils [ ] 3
Dermatitis [ ] 4
Fungus [ ] 5
Warts [ ] 6
Seborrhoea [ ] 7
Other.....
..... [ ] 9

12. B.C.G.

Given Previously		Given After Examination	
		Yes	No
Yes		1	2
No		3	4
		Chest X-ray	Chest X-ray
		+ [ ] — [ ]	+ [ ] — [ ]

13. Mantoux

-ve [ ] 0 5 [ ] 1 10 [ ] 2 15 [ ] 3 20 [ ] 4 25 [ ] 5 over 25 [ ] 6

14. Examiner.....[ ]

Examiner	1	2	3	4	5	6
Code	J	K	L	M	N	O

APPENDIX. 6.

No. ...../6

THE UNIVERSITY OF ADELAIDE

STUDENT HEALTH SERVICE

PERFORMANCE SHEET

S.H.S.

Card 3

No. ...../6 1-5

SURNAME ..... OTHER NAMES ..... AGE 6-7

AGE ..... FACULTY ..... FAC 8-9

MARITAL STATE

Married [ ]1 Single [ ]2 Widowed or Divorced [ ]3 M.S. 10

A PHYSICAL FITNESS

A

a General

Healthy [ ]H Unhealthy [ ]U a 11

b Defective areas or organs b 12

Eyes [ ]2 Respir. [ ]5 Nerv. S. [ ]9 13

Ears [ ]3 Circ. [ ]6 Skeltl. [ ]0 14

N. & T. [ ]4 Ga-I. [ ]7 Skin [ ]1 15

Ge-U. [ ]8 16

B EMOTIONAL STATE

B

a General

Normal [ ]N Abnormal [ ]R a 17

b Disorders

Inadequate [ ]I Tense-Domestic [ ]D b 18

Immature [ ]M Economic [ ]E 19

Migraine [ ]H Lodging [ ]L 20

Psychotic [ ]P Sexual [ ]S (If 0, specify)

Other (e.g. epilepsy [ ]O Study [ ]A .....

C SOCIAL

C

1 HOUSING

1

a Home

Adelaide Country

Good residential [ ]G Town [ ]T a 21

Medium residential [ ]M Rural [ ]C

Poor residential [ ]S Interstate [ ]I

Overseas [ ]O

b Lodgings

Home [ ]H University college [ ]U b 22

Flat [ ]F Lodging or Hostel [ ]L

5 SPORT AND RELAXATION

a Sport

Approx. average no. of hours a week spent playing sport	Sports played, in order of importance
(a) Term 1	....
(b) Term 2	.....
(c) Term 3	.....
(d) Exams & Swot Vac	.....
(e) Holidays	.....

b Relaxation

Nil	[ ]0	Chess	[ ]4	Church	[ ]8
Art	[ ]1	Reading	[ ]5	Youth Work	[ ]9
Music, Singing	[ ]2	Radio	[ ]6	Fishing	[ ]-
Photography	[ ]3	T.V.	[ ]7	Other	[ ]+

5
a
(a) 43
(b) 44
(c) 45
(d) 46
(e) 47
b
..... 48
..... 49
..... 50
(If "other", specify)
.....

6 COUNTRY OF BIRTH AND RESIDENCE IN AUSTRALIA

a Country of Birth

Australia	[ ]AA	Malaya-Chinese	[ ]MC	Pakistan	[ ]PN
Britain	[ ]BB	Malaya-Malay	[ ]MM	Hong Kong	[ ]HK
Canada	[ ]BC	Malaya-Indian	[ ]MI	India	[ ]II
New Zealand	[ ]BN	Eastern Europe	[ ]EE	Indonesia	[ ]IN
Cambodia	[ ]C	Southern Europe	[ ]ES	Other	[ ]OO
Thailand	[ ]TH	Western Europe	[ ]EW	.....	

6
a 51-52
(If "other", specify)
.....

b Type of residence in Australia

Permanent	[ ]P	Temporary	[ ]T

b 53

c Time resided in Australia to date .....yrs (Code 9 and over as 9)

c 54

7 NUMBER OF TIMES RETURNED FOR ADVICE ..... (Code 9 and over as 9)

(dates: .....)

7 55

8 HABITS

a Smoking No [ ]0 Yes [ ] ..... Cigarettes per day

(Code actual number of cigarettes. Do not use number ending in 7. P in units column indicates "Pipe".)

8
a 56-57

b Drugs and Alcohol

Neither	[ ]1	D but not A	[ ]3
A but not D	[ ]2	Both D & A	[ ]4

b ...

EDUCATION

a Last Secondary School Attended

High School	[ ]H	College	[ ]C

D
a 59

EDUCATION (contd.)

D

b Leaving and Leaving Honours Results

b

	Exam. Level	Results in Subjects								Score
		A	B	C	D	E	F	G	Tot.	
Year	L [ ]1 LH [ ]4									(a) .....
Year	L [ ]2 LH [ ]5									(b) ....
Year	L [ ]3 LH [ ]6									(c) ...

c University - 1st Year Results

c .

CARD NO.

FAMILY

No. ...../6

a Father

2 a

(a) Location — At Home [ ]1 Divorced [ ]3 Separated [ ]2 Dead [ ]4 — (a) 23

(b) Years since death ..... (Code 9 and over as 9) — (b) 24

(c) Occupation

Professional	[ ]1	Skilled worker	[ ]5	
Semi-professional	[ ]2	Semi-skilled worker	[ ]6	
Clerical	[ ]3	Unskilled worker	[ ]7	(c) 25
Own business	[ ]4	Not known	[ ]9	

b Mother

b

(a) Location — At Home [ ]1 Divorced [ ]3 Separated [ ]2 Dead [ ]4 — (a) 26

(b) Years since death ..... (Code 9 and over as 9) — (b) 27

(c) Occupation

	No Tertiary Edn.	With Tertiary Edn.	
Home Duties	[ ]1	[ ]4	
Working	[ ]2	[ ]5	(c) 28
Not known		[ ]9	

c Number in family ..... (Code 9 and over as 9) — c 29

d Position in family ..... (Code 9 and over as 9) — d 30

e Family estimate

Normal [ ]N Overanxious [ ]O — e 31

Dominant [ ]D Unconcerned [ ]C

f Children of Student (if any) ..... — f 32

SEX

3

a Sex of Student — Male [ ]M Female [ ]F — a 33

b Age of puberty ..... years

Males - appearance of hair
Females - appearance of menses
] Code last digit: 1=11 or less — b 34

c Outlook

Mature - experience [ ]M Immature [ ]I — c 35

Mature + experience [ ]E

STUDY HABITS

4

a Usual Hours

a

(a) Hour of starting .....0 (Continental clock) — (a) 36-38

(b) Hour of finishing .....0 (Continental clock) — (b) 39-41

b Form of break

Nil	[ ]0	Music	[ ]4	b 42
Running	[ ]1	Reading	[ ]5	(If "other"
Walking	[ ]2	T.V.	[ ]6	specify)
Other exercise	[ ]3	Other	[ ]9	