do what he can to correct anxiety and the more obvious environmental factors which may be contributing to the symptoms.

The impression from the follow-up reports of the functional cases is that both physical and mental health have been quite good during the years that followed consultation and that the reassurance provided at the clinic was in many instances justified by the course of events. We have no means of determining accurately the benefit to mental health which accrued from the advice given at consultation, and have relied—as others have—on the reports of the patient's personal medical attendant. In this series the generally good prognosis in neurosis is in accordance with the findings of others.

Eysenck (1952), while surveying the effects of psychotherapy, came to the conclusion that there was little to support the hypothesis that psychotherapy facilitated recovery in neurotic patients. Nevertheless, the role of the doctor as a therapeutic agent is well recognized, and this aspect has been studied and emphasized by Wolf (1959) and by Hankoff *et al.* (1960).

Our impression, therefore, is that the psychological effect of a properly conducted out-patient examination can be very valuable and is worthy of special study.

Summary

About 5% of out-patients attending a neurological clinic were thought by the consultants concerned to have no significant organic disease to account for their symptoms. A series of 100 of these "functional" cases, which had been treated chiefly by reassurance and explanation, were followed up over five years later.

Eight had left the district and could not be traced. Of the remaining 92, 78 were in good health and had no apparent organic disease, but in 26 of these some minor symptoms persisted although these were not disabling.

Two patients died two and a half years after being seen—one of carcinoma of the stomach and one with disseminated sclerosis. Two patients developed epilepsy, one had a facial pain later relieved by tooth extraction, one developed hypertension, one developed myxoedema, and one developed a prolapsed disk.

Six patients developed organic illness which had no obvious connexion with the original presenting symptoms.

It is suggested that consultants should in most instances endeavour themselves to treat the functional cases attending their clinics and that by conducting follow-up studies they can check on the standard of work.

It seems desirable that the most experienced personnel available should work in the out-patient departments of hospitals.

ADDENDUM.—Since preparation of the paper two further patients have been traced. Both have remained in very good health at the end of a five-year follow-up.

REFERENCES

- Comroe, B. I. (1936). *J. nerv. ment. Dis.*, **83**, 679.
Eysenck, H. J. (1952). *J. con. Psychol.*, **16**, 319.
Hankoff, L. D., Engelhardt, D. M., and Freedman, N. (1960). *Arch. gen. Psychiat.*, **2**, 33.
Herridge, C. F. (1960). *Lancet*, **2**, 949.
Marshall, H. E. S. (1949). *Brit. med. J.*, **2**, 468.
Wolf, S. (1959). *Ass. Res. nerv. Dis. Proc.*, **37**, 147.

TWO GENERATIONS OF BROKEN HOMES IN THE GENESIS OF CONDUCT AND BEHAVIOUR DISORDERS IN CHILDHOOD

BY

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Many reports have demonstrated that the proportion of delinquent children that come from "broken homes" is higher than would be expected by chance, though Wootton (1959) has noted that this is not a universal finding—for example, Ferguson (1952)—and points out the lack of uniformity of definition of "broken homes" in the reports and the difficulty of obtaining a satisfactory control population. A similar high proportion of children from broken homes has been found among children defined as maladjusted—for example, Banister and Ravden (1944, 1945) and Burt and Howard (1952). Among maladjusted children there appears to be an association between the type of symptoms the child presents and the type of home environment. In the study of Banister and Ravden, the proportions of children from broken homes were 81% of 27 delinquent children, 42% of 31 aggressive children, 22% of 41 nervous children, and 8% of 13 backward children. Of 93 children from the same schools who were regarded as normal, only 13% were from broken homes.

Separation from mother during early childhood has been thought to be of major importance in the genesis of delinquency—for example, Bowlby (1944)—and, since separation from mother is more likely to have occurred in a broken home than in an intact one, separation might be the operative factor in the genesis of delinquency in children from broken homes.

The importance of specific parental attitudes and child-rearing practice in the genesis of specific types of disordered behaviour has long been recognized (Cameron, 1919; Kanner, 1957). Valuable evidence has recently been presented about the relationship of particular behavioural characteristics in young children to particular parental attitudes and methods of child-rearing (Sears *et al.*, 1957). Sears found that parents who love and accept their children and use withdrawal of approval as a technique of discipline rather than bribery or physical punishment produced the highest percentage of children rated as having a conscience; these parents also tended to produce a higher proportion of dependent children. Cold punitive mothers produced the lowest proportion of children with a conscience.

Sears also found that aggressiveness in children was associated with inconsistent punitive methods of discipline and occurred in families where aggression was often expressed by the parents but punished physically if it occurred in the child. The mothers of aggressive children and of children with poorly developed consciences tended to lack warmth for their children and to be more punitive; both these characteristics were associated with a low self-esteem, a tendency to be dissatisfied with their lot and with the maternal role, a poor opinion of their husband, and a tendency to disagree with their husband over the

child's upbringing. These findings were based on children in intact homes; it seems probable that these faulty parental attitudes and methods of child-rearing are even more likely to be found in broken homes, where the child is perhaps reared by a disgruntled unhappy mother or by parents who have not had a natural interest in the child from birth. Though affectionate and sensible step- or foster-parents may be far more effective than some natural parents, it is more difficult for them to be so than for natural parents.

The influence of the parents' own home background on their success as parents has not been investigated, though it seems likely that an unhappy childhood may leave its mark on personality in the very areas that Sears noted to be important in child-rearing. Thus it seems a reasonable hypothesis that an individual from a broken home is less likely to have had affection and security in childhood than one from an intact home, and is therefore more likely to have difficulties in relationships with other people and to lack warmth. Probably, also, an individual from a broken home has had breaks in continuity of upbringing and therefore may not have had a consistent experience of child-rearing from birth to adolescence. Such a person, through no fault of his or her own, might be expected to have less confidence, to be less consistent, to be more anxious, and to be generally more inept in child-rearing than an individual whose childhood was spent in an intact home.

Present Study

This study of children attending a child-guidance unit investigates the hypothesis that types of behavioural abnormality shown by children vary not only according to the child's home environment but according to the childhood environment of the parents.

Three distinct hypotheses are investigated, subsumed under this general hypothesis as follows:

The types of behavioural abnormality shown by children will vary (1) between children from broken homes and children from intact homes; (2) between children who have been separated from their mother for more than six months and those who have not; and (3) between children with a parent from a broken home and children with both parents from intact homes.

Definitions and Classifications

Children from intact homes were defined as children living with both natural parents at the time of first examination, the parents having lived together throughout the child's life except for temporary absences due to work or illness.

Children from broken homes were defined as children not living with both natural parents at the time of first examination or having suffered a break due to death, divorce, or separation of parents during the child's life.

Children from intact homes were further subdivided into those who, up to the time of developing their symptoms, had never been separated from both their parents for a period of more than six months at one time and those who had.

Children from broken homes were subdivided into those who had remained with their mother throughout, those who were with mother at the time of admission but had been separated from mother for more than six months, and those who were not living with mother at time of admission.

A parent was defined as coming from a broken home if he had been separated from one or both his natural parents for a continuous period of longer than one year before age 15.

The hypotheses were investigated by calculating the proportions of patients presenting various types of behaviour abnormality and then testing the significance of the difference in these proportions between patients from different types of home. A difference was regarded as significant if the probability of its occurrence by chance was less than one in twenty ($P < 0.05$).

Behavioural abnormality was classified arbitrarily into six categories as follows:

1. Conduct disorder, subdivided as follows:—(a) Delinquent conduct: any conduct of a persistent kind which would be an indictable offence if brought to court (mainly stealing). (b) Antisocial conduct, not aggressive: any repetitive non-aggressive conduct bringing the child into conflict with society—for example, truancy, wandering, destructiveness outside the home, sexual misdemeanours. (c) Aggressive conduct: repeated verbal or physical aggressiveness to parents, friends, siblings, teachers, and others.
2. Neurotic behaviour: anxiety, depression, timidity, obsessional features, shyness, inhibition.
3. Tension habits (Cameron, 1955): tics, habits involving biting, chewing, and picking.
4. Gratification habits (Cameron, 1955): habits involving sucking and other oral or genital gratification, day-dreaming.
5. "Psychosomatic" symptoms: physical symptoms with no organic cause—for example, pains, enuresis, encopresis—and syndromes in which psychological factors are thought to play a major part in aetiology, such as asthma, migraine, allergies.
6. Educational retardation; school complaints of backwardness or failure to learn, or the reading age is found to be more than $1\frac{1}{2}$ years below the chronological age.

If a child had symptoms in more than one category all were recorded; therefore a large proportion of children are included in more than one category.

Only symptoms which were definite and present repeatedly from day to day were included. Isolated and fleeting symptoms were not recorded.

Method

Data were collected on 185 children (60 girls, 125 boys) aged 4–15 years seen by me at the Brixton Child Guidance Unit (L.C.C.) between February, 1959, and February, 1960. In addition to the data already outlined the I.Q. and reading age were recorded if available. In most cases intelligence had been measured on the Terman-Merrill revision of the Binet (form L); in a few older children the Wechsler scales were used. Reading was tested by the Schonell graded word-reading test.

The age and sex distribution of the children in the sample does not differ from that reported for all L.C.C. clinics each year (unpublished reports), and the sample is regarded as representative of the clinic population as a whole. As in all reports, there is an excess of boys aged 10 and under.

Results

Child's Home

Of the 185 children, 120 (65%) came from intact homes, and 12 of these had been separated from their parents for an unbroken period of more than six months. The other 65 came from broken homes; of these, 43 were living with their natural mother, but 17

of these had been separated from her for a period of more than six months at some previous time.

There are significant differences between children from intact homes and children from broken homes in the proportions which present neurotic behaviour and conduct disorder (Table I). The proportion of children

TABLE I.—*Type of Behaviour Problems in 65 Children from Broken Homes and 120 Children from Intact Homes*

Child's Home	Type of Behavioural Abnormality						
	Stealing	All Conduct Disorder	Neurotic Behaviour	Tension Habit	Gratification Habit	Psycho-somatic Symptom	Educationally Retarded
Intact	21.7%	44.2%	46.7%	40.8%	19.2%	29.2%	38.3%
Broken	50.8%	80.0%	24.6%	46.2%	23.1%	27.7%	38.5%
Difference	-29.1%	-35.8%	+22.1%	-5.4%	-3.9%	+1.5%	-0.2%
Sig. of diff. (t)	4.04*	5.26*	3.11*	0.72	0.62	0.22	0.03

* Statistically significant difference at the 1% level.

from broken homes presenting disordered conduct was high, and the proportion presenting neurotic symptoms was low; the exact opposite held for children from intact homes. These differences are highly significant. The differences in proportions of children presenting other abnormalities of behaviour are small and not statistically significant.

Separation

The influence of prolonged separation (greater than six months) is considered separately for children from intact homes and children from broken homes.

Among children from intact homes there are significant differences in symptoms between those who have suffered a prolonged separation from their mothers and those who have not (Table II). Of those who

TABLE II.—*Relation of Behavioural Abnormality to Prolonged Separation from Mother in 120 Children from Intact Homes*

Separated from Mother for More than 6 Months	Stealing	All Conduct Disorder	Neurotic Behaviour	Tension Habit	Gratification Habit	Psycho-somatic Symptom	Educationally Retarded
Yes (12)	67%	92%	17%	33%	25%	33%	66%
No (108)	17%	39%	50%	42%	19%	29%	35%
Difference	+50%	+53%	-33%	-9%	+6%	+4%	+31%
Sig. of diff. (t)	3.37*	4.5*	2.75*	0.06	—	—	1.94†

* Difference statistically significant at the 1% level.

† Difference on borderline of statistical significance.

had suffered a prolonged separation 92% presented disordered conduct, compared with 39% of those who had not been separated. In contrast, only 17% of those who had been separated presented neurotic symptoms, compared with 50% of those who had not; both these differences are highly significant.

Among those who had been separated, a greater proportion (66%) were educationally retarded compared with those who had not been separated (35%); this difference was on the borderline of significance at the 5% level. When other symptoms are considered, the differences between the two groups are small and not significant.

Among children from broken homes there is no significant difference in symptoms between those who had remained with their mother throughout and those

who had not. Of the children who had been separated 74% presented conduct disorder compared with 88% who remained with their mother throughout; 15% of children who had been separated presented neurotic symptoms compared with 31% of children who remained with their mother; neither of these differences was statistically significant.

Parents' Home

It was thought that if the parents' childhood environment had any effect on the behaviour abnormalities of their children it would be most noticeable among those who had been with their children throughout the child's life. Therefore only children from intact homes with no prolonged separation are considered (Table III).

TABLE III.—*Relation of Behaviour Abnormality to Early Home Environment of Parents in 108 Children from Intact Homes*

	Stealing	All Conduct Disorder	Neurotic Behaviour	Tension Habit	Gratification Habit	Psycho-somatic Symptom	Educationally Retarded
Both parents from intact homes (50)	10%	24%	68%	38%	20%	32%	48%
At least one parent from broken home (58)	24%	52%	34%	48%	19%	28%	40%
Difference	-14%	-28%	+34%	-10%	+1%	+4%	+8%
Sig. of diff. (t)	2.0*	2.9*	3.8*	1.4	—	—	—

* Difference statistically significant.

Among these children there are significant differences in symptoms between those with one parent who had suffered a broken home in childhood and those with both parents apparently from intact homes. (The latter group included nine where data on the home background were incomplete.) Where both parents had intact homes in childhood, only 24% of the children presented disordered conduct, while 68% presented neurotic behaviour. In contrast, where at least one parent had suffered a broken home in childhood, 52% of their children presented disordered conduct and only 34% presented neurotic behaviour; these differences are highly significant. The differences between the groups in the proportions presenting other behaviour abnormalities are small and not statistically significant.

There was no significant difference in the proportions presenting different behavioural abnormalities when those whose father suffered a broken home in childhood were compared with those whose mother had suffered a broken home in childhood. 38% of those whose fathers had suffered a broken home, 61% of those whose mothers had suffered a broken home, and 56% of those both of whose parents had suffered a broken home presented disordered conduct; the numbers are small.

Among children from broken homes the numbers are too small and the data insufficiently complete to provide useful evidence about the influence of the parental home background on the type of behavioural abnormality presented.

The accompanying Chart summarizes the relationship between type of behaviour abnormality and type of home background. It is apparent that the only categories of behaviour abnormality in which there is any significant relationship are conduct disorder, including delinquent conduct, and neurotic behaviour, and that the relationship is exactly opposite in these two

categories. There is some suggestion that these two categories tend to be mutually exclusive; they occur together in only 19 out of 156 cases where one or other was present.

Proportions of children with various behaviour abnormalities in three groups: A, Children from intact home and no separation, both parents from intact home. B, Children from intact home, one parent from broken home. C, Children from broken home or separated from mother for long period.

Age, Sex, and Intelligence.—Though these factors were related to the type of symptoms presented they did not influence the relationships already described.

Discussion

Wootton (1959) pointed out that eventually every home must be "broken." The present study confines the term "broken" to those homes disrupted by separation, divorce, or death before the individual under consideration was aged 15. Of the 370 natural parents of children in this study, 31% are known to have come from a home broken before they were aged 15; in a further 18% data are not available, but it seems unlikely that all of these came from intact homes.

When the children are considered, in only 41 cases (22%) did the child and both his parents come from an intact home; in a further nine cases of children from intact homes data were incomplete about the parents. In the whole series at most only 50 children could have come from intact homes with both parents also from intact homes, while 135 (75%) definitely either came from a broken home or had at least one parent from a broken home. This in itself is striking, though since no comparable figures are available for the general population it cannot be asserted certainly that these findings differ from those which would be found for a normal population of schoolchildren. However, the finding is even more striking when children presenting different syndromes are compared. Of the 50 children with a putative background of two generations of intact homes 24% presented disordered conduct and 68% presented with a neurotic symptom. Of the 135 other

children, 69% presented disordered conduct and 27% presented neurotic symptoms. To put the finding in a different way, 49% of the children presenting neurotic symptoms came from an intact background compared with only 11% of the children presenting disordered conduct.

The proportion of children with other symptoms does not vary with either the child's home background or the parents' home background; tension habits occur in 40% of children from completely intact homes (over two generations) and 46% of children from other homes; the corresponding percentages for educational retardation are 50% and 44%. This negative finding provides evidence that the positive findings are neither artifacts nor are due to chance.

The relationship between the type of home background and the kind of behaviour disorders presented is even more striking when mixed cases are excluded. Of 77 children from broken homes the majority presented pure conduct disorder and very few pure neurotic symptoms, while of 50 children from homes intact over two generations the reverse is true. The majority of 84 children presenting purely conduct disorder came from broken homes, while the majority of 50 children presenting only neurotic symptoms came from an intact home over two generations.

When the question of the meaning of these results in terms of the individual is considered, they are found to be in accord with current ideas about the genesis of different types of behaviour disorder. Antisocial behaviour and conduct disorder are thought to be associated with a home background of discord and with parents or parent surrogates who tend to be hostile to, and neglectful of, the child; physical punishment is frequent and aggressive behaviour is common both between the parents and towards the child. In contrast, neurotic symptoms are thought to be associated with a home background where excessive anxiety, over-protectiveness, and over-solicitude are characteristic of the attitude of the parents to the child and where overt expression of sex and aggression are disapproved of and inhibited. A child from a broken home is much more likely than is a child from an intact home to meet the conditions postulated as causing disordered conduct, and less likely to be brought up in an atmosphere of constant protectiveness, over-solicitude, and fussiness.

Parents from broken homes are more likely to have difficulties in relationship with other people and to have more difficulty in providing a child with affectionate, stable, secure environment, as they are less likely to have experienced it themselves and are more likely to have been exposed to experiences damaging to personality or militating against the development of normal personality.

The possible influence of genetic, in addition to environmental, factors cannot be excluded in the interpretation of these findings. If inability to maintain an intact home were an indication of psychopathy in one of the marital partners, then it is possible that the findings in children with conduct disorders indicate a genetic predisposition to psychopathy.

The evidence that psychopathic traits are passed from one generation to another has hitherto been interpreted as illustrating the role of inheritance in the genesis of psychopathy. The present study suggests an alternative explanation—that faulty child-rearing by parents results from an unfortunate experience of faulty rearing during

their own childhood. Evidence from individual cases suggests that this vicious cycle may go back several generations, starting with a home accidentally broken by death or illness.

Conclusions

The evidence of this study makes clear the following points about children attending a child-guidance clinic.

1. Children from broken homes are particularly vulnerable to disorders of conduct which bring them into conflict with society, and apparently less vulnerable to neurotic disorders.

2. Separation from mother is associated with the development of conduct disorder and appears to militate against the development of neurotic symptoms among children from intact homes, but there is no such differential among children from broken homes. Children from broken homes remaining with mother throughout childhood had as high an incidence of conduct disorder as those who were separated temporarily or permanently. This suggests that separation is not the primary factor, but that separation and broken homes are two kinds of occurrence which result in adverse child-rearing experience and hence in disordered conduct. In the present study the type of symptoms presented did not vary according to the age at which separation or broken home occurred; in every case this had taken place before the age of 10. In other studies the age at which separation occurred has been found to be important, but it must be recalled that a rigorous definition of separation was used in the present study. Very long periods of separation are likely to be harmful at any time in childhood. Broken homes due to separation or divorce must be the culmination of long-standing marital disturbance, so that the age of the child at the final break does not indicate when he was first exposed to a pathogenic home environment.

3. Parents of either sex who come from a broken home appear likely to have more difficulty in rearing a child free from conduct disorder than do parents from intact homes; on the other hand, such parents appear less likely to rear a child with neurotic symptoms than do parents from intact homes.

4. Disordered conduct and neurotic symptoms appear mutually exclusive, and situations where one is common appear to be situations where the other is rare, and vice versa.

5. A remarkably small proportion (less than 25%) of children referred to a child-guidance clinic could boast both an intact home background and both parents from an intact home background.

From the point of view of reducing antisocial disorders the social reformer might do well to concentrate his attention on the children from broken homes before they develop symptoms. The breaking of a home usually comes to the notice of one of the social authorities. Deaths are notified; adoptions, divorce, legal separations, and institutionalization of children are all arranged through some official body; it is known on registration whether a child is legitimate or not, and health visitors should be aware of anyone fostering a child in their neighbourhood. From these sources it may be possible to establish and maintain a register of children who have suffered a severe disruption of their natural home environment. We suggest that it would benefit society if these children became the focus of discreet attention by health visitors, teachers, school doctors, and other persons responsible for the well-being of children, so that appropriate action could be taken at the first sign of either deterioration in the environment or of emotional disturbance in the child. Psychiatric support and advice to a recently bereaved mother, new foster-parents, or a new step-parent might prove infinitely more valuable by arresting the develop-

ment of emotional disturbance in the child than is psychiatric treatment when a conduct disorder is well established.

Before taking such a controversial step it would be valuable to run a pilot investigation of a randomly selected sample of children from broken homes to obtain data on the effect of such breaks. Information on the differences between the handling and placement of children from broken homes who emerge symptom-free and those who do not would prove invaluable in planning placement and for advising foster-parents and house mothers. At the moment no such data are available.

It seems likely that insufficient guidance and preparation for parenthood is given to people from broken homes and that such preparation, guidance, and supervision would be a very valuable prophylactic measure. It is also evident that little or no guidance in and supervision of child-rearing practice is given to foster-parents, adoptive parents, and house mothers, despite the fact that they may be dealing with emotionally damaged children. Our findings indicate that the children's officer and the child-psychiatrist cover much common ground and that close liaison between them will be of mutual benefit for their work with the deprived child. Prophylactic work is essential, since children with established conduct disorder do not seem to respond well to the usual methods of discipline or even to the most severe punishment, nor are current methods of psychiatric treatment very successful. Their prognosis in adult life appears to be very bad; they tend to become misfits in society, and if not actively criminal are an economic liability because of frequent unemployment and job-changing. If they marry or even if they do not, they are also likely to perpetuate their disability to the next generation by their faulty child-rearing practice or by producing another "broken home."

Summary

A study is reported of 185 children referred to the Brixton Child Guidance Unit. The relationship between the type of symptom presented and the home environment of both the child and his parents is investigated. A high percentage of the children and of their parents come from broken homes; this percentage is very high for children presenting disordered conduct and lower for children presenting neurotic symptoms. If the child's home was intact, prolonged separation from mother was found in a high percentage in those presenting disordered conduct. Separation from mother made no difference to the type of symptom a child presented if he came from a broken home. Where the home was intact and there had been no prolonged separation from mother, the parents' home environment was found to be related to the type of symptoms the child presented; when one parent came from a broken home a high proportion of children presented conduct disorder, while where both parents came from an intact home a high proportion of the children presented neurotic symptoms.

It is noted that less than 25% of children in this study could boast two generations of unbroken homes, which is thought to be beyond the realm of probability for a normal population of children. It is suggested that a register of all children from broken homes should be compiled, that such children should be supervised and followed up into adult life, and that prophylactic

measures should be developed to help them achieve socially and mentally a healthy childhood and adult life.

Information is needed about the proportion of children from broken homes who develop normally and the characteristics of their rearing which result in this healthy development, since we would like to emulate them in our foster homes and children's homes.

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REFERENCES

- Banister, H., and Rayden, M. (1944). *Brit. J. Psychol.*, **34**, 60.
 ——— (1945). *Ibid.*, **35**, 82.
 Bowlby, J. (1944). *Int. J. Psycho-Anal.*, **25**, 19, 107.
 Burt, C., and Howard, M. (1952). *Brit. J. Psychol.*, **5** (Statistical Sect.), p. 39.
 Cameron, H. C. (1919). *The Nervous Child*. Oxford Univ. Press, London.
 Cameron, K. (1955). *Brit. J. med. Psychol.*, **28**, 67.
 Ferguson, T. (1952). *The Young Delinquent in His Social Setting*. Oxford Univ. Press, London.
 Kanner, L. (1957). *Child Psychiatry*, 3rd ed. Thomas, Springfield, Illinois.
 Sears, R. R., Maceoby, E. E., and Levin, H. (1957). *Patterns of Child Rearing*. Row Peterson, New York.
 Wootton, B. (1959). *Social Science and Social Pathology*. Allen and Unwin, London.

PERSONALITY OF STUDENTS WITH ACNE VULGARIS

BY

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Skin diseases figure prominently in the growing literature on psychosomatic disorders. In some conditions it has come to be accepted, probably correctly, that psychological factors are important; in others their role is uncertain and the evidence is conflicting. See reviews by Goldsmith and Hellier (1954), Macalpine (1954), Norton and Smith (1955), and Obermayer (1955).

In acne vulgaris a widely held view is that of Mitchell-Heggs (1950), who states that "the acne subject is often of unstable, nervous make-up, and is prone to emotional disturbance." Characteristics of the acne sufferer noted by other authors are: obsessiveness and feelings of inadequacy giving rise to difficulty in social contacts (Halliday, 1949); a tendency to anxiety, obsessiveness, and introversion (Smith, 1951); and self-consciousness (Moloney, 1947). Wittkower (1951) made a detailed study of 64 cases and described four classes of personality among acne sufferers. His descriptions include many of the traits generally recognized as being part of a neurotic personality structure (perfectionism, tension, anxiety in social contacts, sensitivity to criticism, eagerness to be liked, harshness of conscience, and a tendency to self-reproach). Goldsmith and Hellier comment that "Wittkower's observations apply rather to those who complain of their acne than to those presenting acne during a routine examination," a criticism which may well apply to other studies.

However, the view that acne sufferers are neurotic is not shared by all dermatologists. Cohen (1945, 1961) has reviewed the literature and reported his own observations. Despite much evidence relating acne to personality difficulties—in particular, difficulties in

sexual adjustment—and the often clear relationship between exacerbations of the condition and environmental and personal stress, his own conclusion is that most patients with acne are not markedly neurotic. This view is in broad agreement with that of Obermayer (1955).

In addition to clinical observations, psychological tests have been used by a number of investigators. However, the results are equally inconsistent. Cohen (1945) used Lowenfeld's mosaic test, but was unable to demonstrate any difference between the personalities of soldiers with acne and controls. Narciso (1952) compared a group of college students with and without acne, using the Minnesota multiphasic personality inventory (M.M.P.I.). Significant differences were found on four of the nine scales (hysteria, psychasthenia, hypochondriasis, and schizophrenia). The differences were interpreted as indicating that the acne groups were more concerned about bodily function, less mature, more troubled by phobic or compulsive behaviour, more liable to mild depression, excessive worry, and lack of self-confidence, and more withdrawn than the controls. Geist (1957) used the M.M.P.I., Rorschach, and the "draw a person" test to compare five categories of skin disorder. He describes acne sufferers as psychoneurotic, with sexual difficulties, "schizophrenic diathesis," a tendency to develop conversion symptoms, and as having "the least control, the most impulsive behaviour, and infantile personalities." Pakesch and Kresbach (1959) used the Rorschach and Szondi tests and found some evidence of neurotic depression in acne sufferers, which they regarded as a reaction to the acne rather than a cause.

The main aim of the present investigation was to compare the personalities of three groups of students: (1) controls (free from acne); (2) students with acne who did not complain of it; and (3) students with acne who sought treatment for it. A second aim was to determine, independent of the personality test, the prevalence of reported psychological symptoms in the three groups during an observation period of one year.

Method and Procedure

To assess personality the Maudsley personality inventory (M.P.I.) was used (Eysenck, 1959). This gives measures of "neuroticism" and "extraversion" as defined within Eysenck's theory of personality. Neuroticism refers to the "general emotional lability of a person, his emotional over-responsiveness, and his liability to neurotic breakdown under stress. Extraversion refers to the outgoing, uninhibited social proclivities of a person." The advantages of the M.P.I. for the present study were: (1) it is simple to administer, (2) it is of established reliability and validity, and (3) it would be likely to distinguish persons with the kind of traits noted as characteristic of the acne sufferer.

During the latter part of the first term of the 1959 session, students who attended for health examination were asked to complete the M.P.I. At the end of their examination note was made of the presence or absence of clinically obvious acne of the face or back, and of whether or not the student made any complaint about his skin. In addition, students who came for a consultation at the health centre seeking treatment for acne were asked to complete the M.P.I. The collecting of cases and controls was concluded at the end of the term. The results of the personality tests were analysed at the