

## Section of Psychiatry

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### Psychiatric Effects of Severe Personal Experiences During Bombing.

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IN this war hardship and terror have been meted out to civilians in a random manner, and groups of normal population can be found who have all suffered a similar major disaster; with these groups it is possible to study the relative importance of various factors which may contribute to the development of neurosis after such an experience. During a recent survey in a heavily bombed English city, which involved the interviewing of approximately 1,000 individuals, one such group was studied in this way.

#### *Method*

(a) *Choice of Sample.*—Records were obtained of all the cases admitted to the First Aid Posts during the period of heavy bombing who were not recorded as physical illness or injury between the ages of 18 and 65. These were then visited ten months later, some months after the cessation of frequent bombing. It was anticipated that, while throwing some light on the reasons other than physical illness or injury which send people to a F.A.P., this would provide a sample of those who had suffered severe personal experiences, and a nearly random sample of those whose experiences had been severe. For it was the usual practice for the A.R.P. workers to send all these cases to the post for an examination to exclude physical injury; also others who had suffered lesser experiences were often sent for a wash, accompanying others injured at the incident, &c.

All traceable individuals were interviewed (127, or 75% of the "possible" sample and 59% of the listed names). These were first grouped according to the reason for their admission to the F.A.P.:—55% (Groups A and B) merely because of involvement in an incident, 34% (Groups C and D) because of uncomplicated nervous symptoms, and the remainder (Group E) because of nervous symptoms complicated by physical illness or injury. Groups A, B and C were pooled to study the causes of neurosis development and included all those who had suffered involvement in a precipitating incident; only Group A gives an unbiased indication of neurosis incidence—it comprises all those buried for over an hour.

(b) *Collection of data.*—All were first visited by a psychiatric social worker, and those still suffering from neurosis, as well as several others, were then visited by the psychiatrist, whose attention was directed especially to assessing the incidence of neurosis, its causes and the factors tending either to its persistence or to its recovery.

#### *Incidence of Neurosis and Allied Effects*

(a) *Neurosis.*—As indicated in Table I, among those who were buried for over an hour (Group A), approximately equal proportions developed no subsequent neurosis, a temporary neurosis, or a "persistent" neurosis, (i.e. symptoms still present at the time of the interviews ten months later). Table I has been arranged to show separately neurosis whose incapacitating effect was proved either by medical certificates or statements of absence from work without other cause; 40% of this group developed such neurosis—8% losing an average of three weeks due to "probable neurosis", 23% an average of eight weeks due to definite temporary or slight persistent neurosis, and 11% an average of thirty-one weeks due to persistent neurosis of moderate severity. It may be noted that when the neurosis produced an incapacity for over two months, it was very chronic. Among the 73 cases of neurosis in Groups A-C, there were only two instances in which the incident did not precipitate it within a few days of the event.

Evidently such a severe experience as being buried for over an hour, together with the many other disasters which often accompany this, is more usually followed by "neurotic" symptoms than otherwise, and it is the prolongation of these to cause more than two months' absence from work which should be regarded as an abnormality. Clearly the

extent of neurosis development depends partly on the environmental conditions, and on the treatment given—so the above figures can only refer to the city investigated.

TABLE I.—INCIDENCE AND DURATION OF NEUROSIS.

Group	Little or no neurosis			Temporary neurosis			Persistent neurosis			Total
	I a	I b	I c	II b	II c	II d	III b	III c	III d	
A. Buried over one hour	6	4	2	8	3	-	3	5	4	35
	(34%)			(32%)			(34%)			
Total.—	(35%)			(34%)			(31%)			
Group A + B + C	21	7	5	20	7	5	11	8	10	94

NEUROSIS SUBDIVISIONS.—a—No neurotic symptoms. b—Neurosis without evidence of loss of worktime. c and d—Neurosis with evidence of absence from work. (Ib and c—Probable neurosis. IIId and IIIId—more severe symptoms than IIc and IIIc).

Average worktime lost.	Group A	Groups B & C
Ic—3 weeks	2 weeks	2 weeks
IIc—8 weeks	2 weeks	2 weeks
IIIc—8 weeks	5 weeks	5 weeks
IIId—31 weeks	21 weeks	21 weeks

*Criteria of neurosis and of abnormal anxiety during raids.*—In the interview inquiry was made for any physical symptoms of ill-health, and then whether he had been able to perform his usual tasks and habits. So a discussion evolved which usually elucidated the mood and preoccupations without its appearing to be directed to this end. Neurosis was judged to be present when there was evidence of any interferences with normal or usual mental activity, which had dated from this event and had lasted for at least a week. Only if there was this indirect evidence of mood or other neurotic disorder, and if it could not be attributed to any physical disorder, was neurosis noted. The severity of the neurosis was graded according to its interference with function. It will be remembered that actual worktime loss was usually used also to measure the severity—except for some housewives and retired individuals. When there was room for doubt concerning the neurotic basis of any incapacity, it was classed as “probable neurosis”.

The individuals were also asked about their tendency to somatic anxiety during raids. Symptoms subsiding within quarter-half an hour of the signs of danger (e.g. planes, or bombs) and not persisting with slight signs of danger (e.g. a “quiet” alert), were classed as average. Only when they were induced by slight stimuli or persisted over half an hour after the cessation of the stimulus were they classed as abnormal.

It is only to be expected that a large proportion (60%) were still more anxious during raids than they had been before the incident; 51% were then abnormally anxious during the raids. This may be compared with 45% for another random group of housewives living in a heavily bombed district of this city. In most instances where the experience had altered their tendency to anxiety during the raids, this change had been persistent.

*The type of neurotic symptoms.*—Little record was available of the clinical state on arrival at the Post. Evidently none were in very acute panic states; those admitted with nervous symptoms had been admitted in various degrees of emotional excitement, acute restless anxiety or depression, often with tremors, in “dazed” states or as “shock”.

The following types of neurosis were seen:—anxiety state (11%), anxiety and depressive state (56%), depressive state (16%), anxiety state hysteria (16%). In most of these instances of anxiety hysteria the disorder started as an anxiety state to which hysterical features were added later. Most of these cases were in the group with persistent neurosis.

The type of disorder discovered may be illustrated by a few typical case-histories:

(1) Moderate temporary neurosis. Case 3202 was a married man of 56 whose house was hit, burying him (for a quarter of an hour) and his family—two children were killed, the two others seriously injured, and his wife subsequently developed a neurosis. He spent about an hour helping to dig out the others; hearing their groans made him feel “in a mental frenzy”, and he finally fainted and was taken to the F.A.P., and thence to hospital. There he felt “terrible—miserable and collapsed”, did not sleep for two days, and vomited frequently during the first few days. He left hospital after a week, arranged all the family affairs, while living with friends out of the town—he found this a help as it prevented him thinking, but was completely exhausted each evening. During the first two months he felt very depressed and lost a stone in weight. Then he returned to his home and work, and began to sleep again, to feel less depressed and worried and gradually regained his energy. He is still somewhat below par but performing his responsible work efficiently. Previously he had always had good health and had been an energetic, stable, serious and conscientious person. In the last war

he had been torpedoed several times. At the time of the incident he had been enjoying his responsible post and his home life.

(2) Moderate persistent neurosis. Case S26 was a married man of 51 with no family, who had been in his shelter room when his home had been hit, covering him with debris up to his chest for two and a half hours. During this time, he had feared his wife was killed, was scared of the falling bombs and of not being found. His business—a small shop—had been destroyed by the incident. He was admitted to hospital with paralysed legs, which recovered spontaneously five days later. During the first few weeks he was depressed and worried over his affairs and over the pain in his back (nothing abnormal diagnosed by X-ray) which has persisted, and could scarcely sleep at all. He has been under doctors ever since, including a period in hospital for treatment to his back and to his "nerves". He only began to pick up six months later when he was able, with his wife's help, to recommence his business. He had previously kept good health, and been a cheerful, energetic and sociable person, well known in the neighbourhood.

(3) Slight temporary neurosis. Case S33 was a married woman of 46 whose house had been hit, covering her with debris in the gas cupboard for an hour; on her release bombs were still falling and she saw the large crater, so near—though she had not been very nervous before, she now felt "she could run for miles". Her son had been seriously injured beside her. She felt fairly well the next morning, but was worried and could scarcely sleep for some weeks; "one worry after another" had come upon her after this—her son's injury, her husband became ill and her daughter died with T.B., arranging a new house, &c. However she has since remained well, except for a period of a few weeks in bed in the winter when she was "run-down". She had previously kept good health and been of an energetic, stable personality.

(b) *Other effects. Trekking and evacuation.*—Both trekking and evacuation correlated with neurosis development, being highest in the persistent neurosis group, and lowest amongst those with no neurosis. Permanently moving to a safer area was more frequent in the neurosis group, but not any more frequent in the persistent neurosis group. Of Groups A-C 27% (24) later trekked—18% (17) regularly for a period of over two weeks: the majority of the trekkers had had very severe experiences or had been to the Post with nervous symptoms. 32% (29) of the same group evacuated for a period after their experience, and 55% (52) neither evacuated nor moved permanently to a less bombed district.

#### *Causes of Neurosis Development or Persistence after Severe Personal Bombing Experiences*

Using the group of all those who had suffered such experiences (Groups A-C) this problem was studied in two ways—(1) by comparing the incidence of various factual data in three subdivisions of the group (those who had developed no neurosis, a temporary neurosis, and a persistent neurosis), and (2) with each individual; after the interview an opinion was formed where possible of the main factors responsible for the development of neurosis, and for its persistence or recovery. There were only 94 individuals in this group of whom 73 developed neurosis.

(1) *The composition of the group and their bombing experience.*—Analysis of the age, sex and marital status of the group indicated that it approximated to the adult population of the area. Nearly all had had previous bombing experience average for this heavily bombed area (i.e. at least three months' exposure to fairly frequent and severe bombing near a target area); for 64% of the group the precipitating incident had involved being buried, and nearly all had lost their homes. Most came from a heavily bombed area of the city, and for over half the precipitating incident had occurred during a "blitz". The social status of the majority was that of the lower working class.

(2) *Analysis of the factual data.*—The important points of this analysis are summarized in Table II; space has precluded the inclusion of fuller tables.

TABLE II.—RELATION OF VARIOUS FACTORS TO NEUROSI INCIDENCE AND PERSISTENCE AFTER SEVERE PERSONAL EXPERIENCES DURING BOMBING (GROUPS A, B AND C). 94 CASES.

Factor	No neurosis Younger? Males, fewer widows	Temporary neurosis	Persistent neurosis
Age, sex, m. status ...	—	—	—
Bombing experience ...	Less severe	—	Not clearly different
Abnormal personality ...	10% (Chronic neurosis)	34%	49%
Abnormal living conditions prior ...	0%	18%	18%
Abnormal emotional reaction at time	62%	59%	92%
Serious effects by raid on life ...	4%	43%	55%
No change of home area or evacuation	81%	51%	44%

(a) Age, sex and marital status: The group is probably too small for a comparison of these factors, but there were more elderly people, females and widows in the neurotic group; many were made widows by the event.

(b) Bombing experience: The severity of the experience could not be satisfactorily measured, but the high incidence of neurosis, compared with what was found in the general population was clear evidence of the importance of this factor—if such evidence were needed. The non-neurotic group had suffered slightly less severe previous and precipitating experiences than the neurotic groups, but it did not appear that the persistent group was distinguished by more severe experiences.

(c) Personality: Except for 2 (10%) with other neurosis already present at the time, the non-neurotic group gave no evidence of personality abnormality, while in the temporary neurosis group 7 (24%), and in the persistent neurosis 17 (49%) did. Probably too high a percentage with apparently normal personality did develop a neurosis, for either its development or its persistence to be attributed mainly to personality defect, even if allowance is made for the difficulty of this assessment.

(d) Living conditions prior to the incident: For each individual an assessment was made as to the extent (if any) to which these conditions had provided unusual strains or restrictions.

Among the non-neurotic group none had had serious abnormalities, i.e. financial or other handicaps, worries, restricted interests or activities; 16% had slight difficulties of this sort. In each of the two neurotic groups 18% had had serious difficulties and 11% and 14% respectively slight difficulties.

(e) Emotional reaction at the incident—the subjective nature of the experience: Among Group A 50% had reported being abnormally upset; nearly all of these developed neurosis (90%). This was only more frequent among the group developing persistent neurosis. It should be remembered that all of Group A had suffered a very severe experience, and this may explain why an unduly severe initial reaction distinguished only the persistent neurosis group. While the high incidence of initial terror and upset should be correlated with the high incidence of neurosis in the whole group, the figures do suggest the importance of other factors, particularly for the temporary neurosis group.

This assessment is unfortunately only based on their own reports but probably gives some index of the initial psychic trauma.

(f) Other effects of the bombing incident on the individual's life: Two possibly important effects were available for assessment, the loss of a close friend, or of a home which was especially important to the individual—because of associations, of its being their work place (e.g. shop), or of its being the main interest of a restricted life, &c. Either or both of these factors were present in 25% of all individuals in Groups A-C; in 4% of the group developing no neurosis, 43% of the temporary neurosis group, and 55% of the persistent neurosis group. This appears to be related to the neurosis development but little to its persistence. In all but one of those who developed neurosis after being buried one hour both these factors, as well as the initial terror, had been present.

(g) Continuing living in the danger area: It is particularly hard to differentiate cause and effect here; but the figures are against this alone being an important factor either for neurosis development or for its persistence (see also below).

(3) *Individual assessments.*—For 64 (88%) of those who developed a neurosis it was possible to assess a main cause—in 49% the initial terror, in 29% other effects of the incident on the individual's life, in 13% the instability of the personality, and in 7% other miscellaneous factors.

Causes of persistence were assessed in 64 cases. Apart from personality or constitution which seemed to be the main factor in 21%, two main social settings stand out as being judged mainly responsible for its persistence, in 31% living conditions since the incident which had caused abnormal mental strains (broken homes, financial strains, changed work, long travelling and working hours, worries about children, invalids in the family or home, living in partly damaged or inadequate houses, &c.) and in 41% continued residence in the danger area despite loss of confidence. Among 25 (44%) cases recovery was mainly attributable to environmental factors—58% to reduction of the exposure to raids (i.e. by temporary or permanent removal from the area, or the later decrease of raids) and in 18% to the resumption of normal work interests and activity when adequate recovery had occurred.

(4) *Conclusions concerning the causes of neurosis development.*—The above analysis indicates that neurosis is likely to develop, especially in an individual whose personality is defective, or whose living conditions at the time of the experience were either restricted or a strain, but also in others if the incident upset them emotionally and seriously disturbed the pattern of their life as by destroying a much-esteemed home or a close friend.

(5) *Conclusions concerning the causes of the neurosis persistence or recovery.*—From the previous factual analysis it emerges that neither living conditions prior to the experience, nor the nature of the bombing experience are important factors for persistence. But personality defects, severe emotional reaction at the time, and possibly disturbing effects of the incident on the individual's pattern of living are likely to predispose to this. Other important factors emerged from the individual assessments. While in the analysis continuance of living in the district did not appear to predispose, it must be remembered that several evacuees were not seen. Continuance despite lack of confidence did appear to be an important cause of persistence; delayed return to normal work, interests and activities were similarly found to be important. Clearly the individual may be helped by the Doctor or Social Agencies: apart from any other treatment, they may reduce these strains, promote an environment and attitude suitable for recovery, making appropriate adjustments as his condition improves. In these ways they had helped in some instances, in the majority they had intervened little or not at all, and in others they had even hindered by encouraging opposite attitudes and tendencies. Another relevant factor was the tendency for the neurosis to become very chronic if a disorder of moderate severity lasted over one or two months (*see* Table I); this suggests the importance of assisting recovery when this does not appear to be commencing within the early weeks.

#### SUMMARY

(1) A group of cases, who had been admitted to F.A.P.s in one English city during a period of heavy bombing, was followed up ten months later; all the traceable cases (127—76% of the possible sample) were visited; a severe personal experience had been the main reason for admission in 55%, and had preceded the admission in 75%.

(2) Of those who had been buried for over one hour (35), 66% developed neurotic symptoms, and 40% neurosis which had caused absence from work; in about equal proportions the neurosis was either temporary or persistent (i.e. for ten months).

(3) The type of neurosis among those who had suffered personal involvement was predominantly mixed depression and anxiety (56%) or either of these alone: a further 16% were cases of anxiety hysteria. 27% had trekked, and 32% evacuated for a period following the experience, while 55% neither evacuated nor moved permanently to a safer area of the city. During the raid ten months later 51% were abnormally anxious, and 59% had become more nervous during the raids.

(4) The causes of neurosis development or persistence were studied on the whole group who had suffered personal involvement (94).

(5) It appears that neurosis is likely to follow severe personal air-raid experiences, which at the time upset the individual emotionally, or produced a serious upset in the pattern of his living by destroying a much-esteemed home or a close friend, especially, but not only, if he is of unstable personality and was at the time living under some other strain.

(6) Neurosis, after such experiences, is likely to become persistent when the personality is unstable, living conditions have become an abnormal strain, either due to general difficulties or to residence in the danger area despite the absence of confidence. Recovery tends to occur when such factors are eliminated and the earliest possible resumption of full normal activities is facilitated and encouraged.

## Neurosis in a London General Practice During the Second and Third Years of War

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THIS paper is intended to be a study of the effects of the second and third years of war on the neurotic or potentially neurotic elements in a London district. It is based on the records of a general practice with which I was associated for eleven years prior to the war and during the first half of the war. When I left this practice to take up psychiatric work entirely, the records were continued by my colleague, Dr. Patrick Walsh, to whom I am deeply indebted.

At the outbreak of war there were about 3,000 private patients on the books. Patients insured under the National Health Insurance Scheme have not been included in this study. They were mainly lower middle class, with a sprinkling of higher social grades, and were a fair sample of the district, except that the ratio of females to males was 2:1 as wives of panel patients would be included but not the husbands.