

characteristic of each individual, and that this maximum immune response was attained after the first dose. Alternatively, it may be speculated that the immunizing effect of a given dosage of influenza virus antigens is relatively suppressed by the presence of circulating antibody, since the lowest percentage rise in antibody titre was obtained in those with the most pre-vaccine antibody.

The somewhat better response of young than of older adults to vaccination would seem to be due to a greater frequency of pre-vaccine experience of Asian antigen in the former age-group rather than to any inherent difference in responsiveness. In fact, the degree of antibody rise in older adults who did show evidence of pre-vaccine immunity was as great as in those young persons in whom the vaccine was similarly acting as a secondary stimulus. The post-vaccination H.I. antibody titres found in the present group of volunteers appear to be somewhat lower than those found in a small sample drawn from other groups participating in the main trial (M.R.C., 1964), although the same test strain of virus was used in each case. These differences may to some extent be due to differences in sensitivity between the W.H.O. test with fowl red cells used in the present survey and that with human red cells in lithium chloride buffer (Himmelweit, 1960) used in the main trial. However, it may be noted that the higher post-vaccine titres found in the main report were largely from individuals with higher pre-vaccine antibody levels than those found in Northwich.

Although H.I. tests with inhibitor-resistant strains such as A2/Pak/1/57 have the advantage of simplicity, the associated lack of antibody-avidity of such strains may underestimate the serological response to vaccine, and fail to detect pre-vaccine antibody in low titre. Thus persons with previous immune sensitization to Asian antigen in whom the vaccine is not acting as a primary immune stimulus cannot be distinguished. The advantage of the tissue-culture-neutralization test for detecting influenza antibodies has been discussed by Beare (1962), and appears to be equally relevant to this present problem.

Summary

Adult volunteers given a single intramuscular injection of oil-adjuvant Asian influenza vaccine containing approximately 1/10 the usual antigen content of saline vaccine were selected for long-term serological investigation as part of a large-scale clinical trial by the Medical Research Council.

Peak titres of haemagglutination-inhibiting antibody occurred one month after vaccination; 44 (81.5%) out of 54 showed a significant rise in antibody, with titres of 1/128 or greater in 34 (64%) subjects. The immune response was greater in persons under 30 than in those over 40.

A small proportion of volunteers had a poor antibody response; these were found to consist of subjects with no evidence of previous experience of Asian virus antigens.

One year after vaccine 34 (68%) out of 50 people continued to show antibody titres of 1/128 or above, and after a further 16 months 9 (45%) out of 20 still had titres of this order.

Revaccination of part of the group 12 months after the initial dose gave an approximately fourfold increase in mean titre. After four months the antibody levels began to decline at almost the same rate as in non-revaccinated subjects.

The immunizing potency of oil-adjuvant vaccine was shown to be substantially unchanged after 12 months' storage at 4° C.

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Effects of Bereavement on Physical and Mental Health—a Study of the Medical Records of Widows

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Despite the large amount of research into the pathogenic effects of stress on human beings and animals, little notice has been taken of one of the commoner major psychological stresses, the death of a loved person. This omission is the more remarkable because grief, the psychological reaction to loss of a loved object, has for many years occupied a central place in the psycho-analytic theory of mental illness.

It is now well established that the mortality rate for many causes of death is much higher among widows and widowers than among married persons of the same age. In a careful analysis of the statistical evidence Kraus and Lilienfeld (1959) show that the "effects of widowhood" (grief and the environmental changes which attend it) are the most likely causes of this increased mortality. More recently Young, Benjamin, and Wallis (1963) have shown that a sharp rise in mortality rate takes place during the first six months of widowerhood, and

that this is followed by a gradual return to a rate near that of married men of the same age. This initial rise after bereavement does not account for the whole of the increased mortality, however, and these workers conclude that a further rise in mortality must take place after the lapse of a few years.

In view of this increased mortality it is to be expected that major bereavements will also be followed by an increased morbidity. Marris (1958), in his study of 72 young widows located at random through the death registration of their husbands, claims that at the time of interview, one to three years after their bereavement, 43% thought that their health was worse than it had been before the loss. In the absence of controls, however, it is not possible to say for sure whether the symptoms of which these widows complained might not have been found with equal frequency in a non-bereaved population.

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A wide variety of somatic and psychosomatic conditions have been attributed to bereavement, but as this is a common stress, and one which is likely to be blamed for any major disorder which follows it, it is necessary to take care that chance associations are not mistaken for causal relationships. A more detailed critique of these issues is given in another communication (Parkes, 1964b).

That bereavement may be a cause of mental illness is attested by the relatively high proportion of widows and widowers among mental-hospital in-patients (McMahon, Pugh, and Ibsen, 1960) and by the finding that patients who had lost a spouse shortly before the onset of their mental illness were five times more frequent among admissions to the Bethlem Royal and Maudsley Hospitals than would be expected if the bereavement had not been a cause of the admission (Parkes, 1964a). The claim that grief is itself an illness, which has been defended by Engel (1961), is supported by the finding that 28 out of 29 bereaved psychiatric patients interviewed by me were found to be suffering from variants of typical grief (Parkes, 1964b).

In the present investigation the medical records of 44 unselected widows which had been made since their bereavement were compared with the records of the same patients during the two years before bereavement. The frequency of consultation for various types of symptom and the type and quantity of drugs prescribed during the pre- and post-bereavement periods could thus be compared.

Method of Investigation

Eight general practitioners who had assisted me in a previous investigation and who were known to keep good case-records were contacted and agreed to take part in the study. Their practices were all located in London and are thought to represent a typical cross-section of metropolitan N.H.S. practices in terms of the age and social class of their patients.

A list of all the male patients who had been removed from the lists of these G.P.s by reason of death during the years 1958–60 was obtained from the N.H.S. executive councils concerned, along with the date on which each death had taken place. By comparing this list with the records kept by each G.P. it was possible to identify those widows of the dead patients who were still registered with the same doctor. Widows who had been registered for less than two years before and one and a half years after the death, and those who had been registered with another practitioner, were not included in the study.

Having located the widows, each case was discussed with the G.P. concerned and the case-notes were perused. A form was completed for each case giving details of the date, cause and mode of death of the husband, the age of the widow at the time of her bereavement, whether the husband had been nursed at home during his last illness and if so for how long, whether or not the death had been expected by the wife, and any major changes which had taken place in the widow's environment before or since the bereavement. In addition, all details recorded in the notes of consultations between the widow and the G.P. during the two years before the death and the first 18 months after the death were copied and any ambiguities or abbreviations were discussed with the G.P. Whenever a patient had been admitted to hospital during the period covered by the investigation details were recorded of the nature of the illness, and dates of admission and discharge were obtained from the hospital reports.

In assessing the data the main measure used was the number of consultations per six-month period. These were assessed for each of eight main subgroups according to the principal symptoms of which the patient complained or the treatment which she was given.

The principal subgroups employed were:

Psychiatric Group.—Anxiety, depression, insomnia, tiredness, "run down," attendance for tonics and sedation.

Hypertension.—Hypertension, blood-pressure greater than 180 systolic and/or 100 diastolic, attendance for anti-hypertension therapy.

Rheumatism and other Muscular and Joint Affections.—All symptoms referable to disorder of the muscles and joints.

Upper Respiratory Infection.—Colds, coryza, influenza, rhinitis, pharyngitis, laryngitis, sore throat, tonsillitis.

Bronchial Affections.—Acute or chronic bronchitis, asthma, and "cough" treated by expectorants or antispasmodics.

Gastro-intestinal Affections.—All symptoms referable to the alimentary canal and attendance for drugs acting on the gastro-intestinal system.

Skin Rashes.—All skin rashes and attendances for topical applications.

Non-respiratory Infections.—All infections and attendances for anti-infective therapy not included above.

Since periods in hospital, during which there would be no consultations with the G.P., might have given a spurious impression of the patient's fitness, a device was needed to rectify this. Consequently during the first three weeks in hospital a G.P.-consultation rate of two a week was scored and thereafter of one a week. In fact, only three patients spent any time in hospital, and the correction has little influence on the overall findings despite the fact that all three of these admissions occurred during the post-bereavement period.

The significance of differences between the consultation rates during pre- and post-bereavement periods were tested by non-parametric statistical methods because the distribution of the pre-bereavement control data was heavily skewed.

Results

Forty-four widows were included in the study. Their age averaged 60.2 years (range 38–81). Only one had not been seen at all by the G.P. during the three years covered by the study.

During the control period the mean recorded consultations/patient/six months was 2.2. This is similar to the consultation rate found by Logan and Cushion (1958) in their large-scale statistical study: among 31 general practices in London and South-east England the average consultation/patient/six months among women between 45 and 64 years of age was 1.8 and in the 65-and-over age-group 2.8. Comparable figures in the control period of the present study were 1.7 in the 45–64 age-group and 2.9 in the 65+ group.

Fig. 1 shows the number of consultations which took place in each of the six-month periods during the two years preceding and the one and a half years succeeding the bereavement. The scale on the left indicates the total number of consultations among the 44 patients, and that on the right indicates the number of consultations per patient. Period 4 is not included in the control period hereafter, since it is possible that illness in the husband influenced the consultation rate of the wife.

It will be seen that the consultation rate for all causes rises from 2.2 consultations/patient/six months during the control period to 3.6 during the first six months after bereavement, an increase of 63%, which involved three-quarters (33) of the patients studied. Thereafter the consultation rate falls to 2.6 and 3.0 consultations/patient/six months during the second and third periods after the bereavement. The overall change in the consultation rate is highly significant ($Z=5.7$, $P<0.001$, Wilcoxon matched-pairs signed-ranks test).

Since consultation rates normally increased with age it is necessary to take this into consideration when assessing any changes which occur between the pre- and post-bereavement

periods. In fact, study of the consultation rates during the control period of patients of different ages shows that we can expect an increase in the region of 6% between the mid-point of the control period and the mid-point of the post-bereavement period. This source of error has been avoided in Fig. 2,

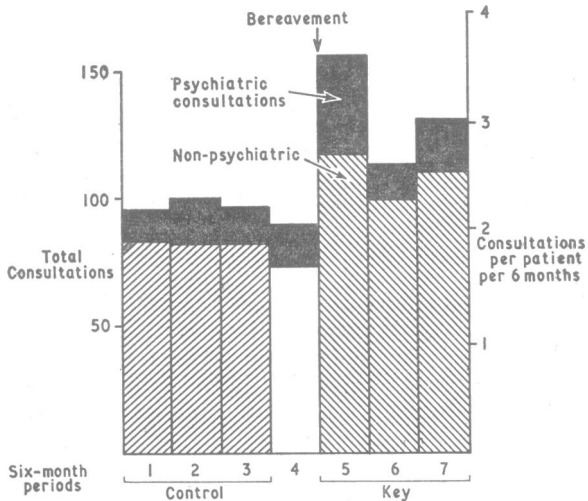


FIG. 1.—Number of consultations before and after bereavement in 44 widows. Six-month periods.

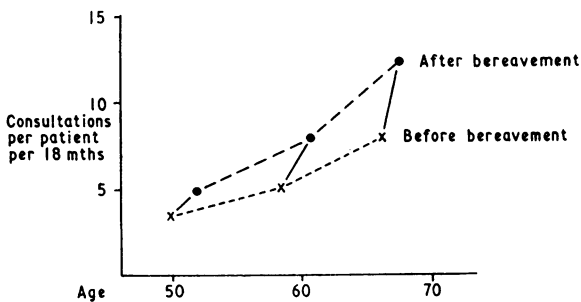


FIG. 2.—Number of consultations by age. Control and key periods compared. Plotted as consultations/patient in each 10-year age-group with the points showing the mean age of the patients in each group. Patients under age 45 (3) and over age 75 (4) excluded.

which shows the number of consultations during the whole 18 months of the control period compared with the number of consultations during the whole 18 months of the post-bereavement period in 10-year age-groups. The points are plotted according to the age of the patients in these groups at the mid-point of the control or key period under consideration. It will be seen that at all ages the post-bereavement rate is higher than the pre-bereavement rate.

The changes in consultation rates in the diagnostic subgroups are here analysed.

Table I shows the number of consultations for the principal diagnostic groups during the whole of the control and key periods. In general it will be seen that there is a rise in the number of consultations for psychiatric and chronic conditions

TABLE I.—Number of Consultations for Various Types of Illness During Control and Post-bereavement Periods

	Pre-bereavement (Control Period)	Post-bereavement (Key Period)
Psychiatric symptoms	42	87
Osteoarthritis	26	59
Hypertension	66	56
Bronchial affections	32	38
Rheumatism, etc.	12	25
Upper respiratory infections	25	22
Gastro-intestinal disorders	34	20
Skin rashes	15	12
Non-respiratory infections	21	6
Total consultations	292	406

such as osteoarthritis and rheumatism, while the number for acute conditions such as infections and gastro-intestinal disorders shows little change.

Psychiatric Symptoms

Since psychiatric symptoms include those commonly attributed to "grief" it is not surprising that they are found more often after a bereavement. It will be seen from Fig. 1 that the increase is greatest during the first six months after bereavement, when the number of psychiatric consultations is almost trebled; thereafter the number falls to around the control level. This finding, too, is quite consonant with the traditional picture of grief as a severe but self-limiting affective disorder.

What is rather more surprising is the finding, illustrated in Figs. 3 and 4, that this increase in psychiatric consultations is

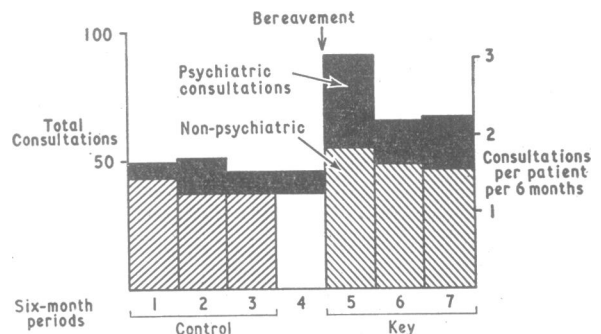


FIG. 3.—Number of consultations before and after bereavement in 29 widows under 65 years. Six-month periods.

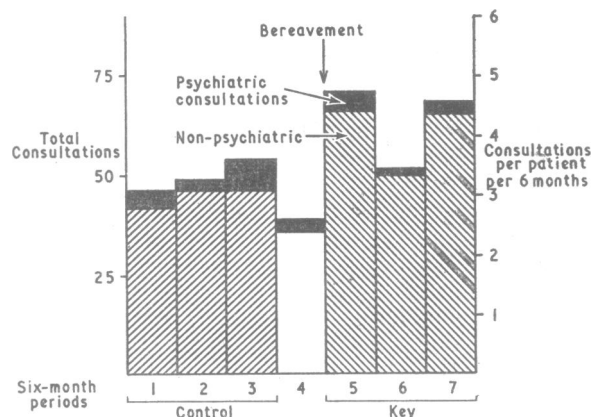


FIG. 4.—Number of consultations before and after bereavement in 15 widows aged 65 and over. Six-month periods.

not found in patients aged 65 and over. The figures show the consultation rates for psychiatric and non-psychiatric symptoms during the control and the post-bereavement periods in patients under 65 and those of 65 and over. While the 240% increase in the psychiatric consultation rate which takes place in the first six months after bereavement among patients under 65 is highly significant (χ^2 200, d.f. 3, $P < 0.001$, Friedman two-way analysis of variance by ranks), the small increase of 25% found in those aged 65 and over is not significantly different from the control rate. When the number of psychiatric consultations in the 18-month control and the post-bereavement periods is compared in the two age-groups the change from 30 to 67 consultations in the under-65 age-group is found to be significantly greater than the change from 12 to 10 consultations in the older group ($Z = 2.1$, $P = 0.018$, Mann-Whitney U-test).

Most of the patients attending with psychiatric symptoms and a number with somatic symptoms were given sedative or

hypnotic drugs. In fact, nearly half the widows (21 out of 44) received a sedative drug at some time during the 18 months after the bereavement.

Table II shows the number of weeks during which a sedative was prescribed per patient in the two age-groups. There is a sevenfold increase in sedation during the first six months of the post-bereavement period among patients under the age of 65 (from a mean of 0.7 to 5.0 weeks of sedation/patient/six months, χ^2 10.7, 3 d.f., $0.02 > P > 0.01$, Friedman two-way analysis of variance by ranks). This increase is maintained at a slightly lower level during the succeeding year (3.8 during period 6— χ^2 2.8, 3 d.f., $0.5 > P > 0.3$ —and 4.1 during period 7— χ^2 6.5, d.f. 3, $0.1 > P > 0.05$). In the 65-and-over age-group, however, there is no such rise during the post-bereavement period, though the sedatives prescribed during the control period exceeded those prescribed during the same period to the younger patients. None of the changes in the older age-group approaches statistical significance, and when the overall change in sedation in the younger age-group is compared with the change in the older age-group there is a significant difference ($Z = 1.84$, $P = 0.03$, Mann-Whitney U-test).

TABLE II.—Number of Weeks per Patient per Six Months During Which a Sedative or Hypnotic Drug was Prescribed—Before and After Bereavement—By Age

Age in Years	No.	Before Bereavement (Control Periods)				After Bereavement (Key Periods)			
		1	2	3	Mean	5	6	7	Mean
Under 65	29	0.5	0.7	0.9	0.7	5.0†	3.8	4.1	4.3*
65 and over	15	2.3	1.7	1.7	1.9	2.5	0.7	0.3	1.0
All ages	44	1.1	1.1	1.2	1.1	4.1†	2.7	2.8	3.2*

* Significant increase over mean control figures, $P < 0.001$.

† Significant increase over mean control figures, $P < 0.02$.

Another group of drugs commonly given during the post-bereavement period were vitamin preparations. Six patients received these preparations during the control period compared with 11 after bereavement, six of the latter during the first six months after the death.

Non-psychiatric Symptoms

When considering consultations for non-psychiatric symptoms, all consultations in which psychiatric symptoms were mentioned or psychotropic drugs prescribed have been excluded, even if there was evidence of accompanying somatic illness. Despite this there remains a significant increase in the number of consultations between the control and post-bereavement periods ($Z = 3.956$, $P < 0.00005$, Wilcoxon test). As can be seen in Fig. 1 the consultation rate is greatest in the first six months of the post-bereavement period, but remains elevated during the subsequent two years. It will be seen from Fig. 3 that in the under 65 age-group the consultation rate/patient/six-month period for non-psychiatric symptoms increases from a mean of 1.2 during the control period to 1.7 during the first six months after bereavement and to 1.6 thereafter. The overall increase is below statistical significance ($P = 0.12$, Wilcoxon test). In the age-group 65 and over, however (Fig. 4), the rate increases from 2.7 during the control period to 4.4 and 4.3 thereafter, the overall increase being statistically significant ($P = 0.05$, Wilcoxon test). Despite this the difference between the overall increases in the two age-groups is below significant levels ($Z = 1.04$, $P = 0.15$, Mann-Whitney U-test).

When the non-psychiatric consultations are broken down further into their subgroups, because of the small numbers of cases involved only one subgroup shows a significant increase after bereavement. This is the subgroup of consultations for muscular and articular affections. Table III shows that in this group there was an increase from 0.11 to 0.52 consultations/patient/six months in the under 65 age-group ($P < 0.05$, Wilcoxon test) and from 0.6 to 0.82 in the age-group 65 and

over (not significant). Further examination of the younger group shows that the increase is mainly accounted for by the consultations for osteoarthritis, which increased from 0.08 to 0.43 consultations after bereavement ($P = 0.06$, Wilcoxon test).

TABLE III.—Number of Consultations per Patient per Six Months for Muscular and Articular Disorders—Before and After Bereavement—By Age

Age in Years	No.	Before Bereavement (Control Periods)				After Bereavement (Key Periods)			
		1	2	3	Mean	5	6	7	Mean
Under 65	29	0.07	0.07	0.2	0.11	0.38	0.45	0.72	0.52*
65 and over	15	0.80	0.53	0.47	0.60	0.73	0.60	1.13	0.82
All ages	44	0.32	0.23	0.30	0.28	0.50	0.50	0.86	0.70

* $P < 0.05$.

Combining consultations for those conditions which are usually classed as "psychosomatic diseases"—migraine, asthma, spasmodic bronchitis, ulcerative colitis, spastic colon, urticaria, alopecia, and rheumatoid arthritis—there was an increase in consultations from 18 during the control period to 28 during the post-bereavement period (not significant).

Other Factors

Antecedent factors which, it was predicted, could be expected to influence the direction and size of changes in the consultation rate after bereavement include the duration of the terminal illness and whether or not the husband had been nursed at home.

If the husband's illness had been very brief and his death unexpected it was found that he had seldom been nursed at home; on the other hand, in most cases in which his death had been expected he had been nursed at home. It was not possible, therefore, to separate the two variables of "nursing at home" and "death expected," each of which might have had a different influence on the consultation rate. In the circumstances it is not surprising that there were no significant differences between the consultation rates for the widows of patients nursed at home and those of patients not nursed at home or between the rates when death was expected and those when death was not expected.

Discussion

Figs. 1–4 show a marked rise in the G.P. consultation rate of widows after bereavement, which is greatest during the first six months. Half the rise is accounted for by a great increase in the number of consultations for psychiatric symptoms, but the rate for these symptoms soon fell to near the control rate, whereas the consultation rate for non-psychiatric symptoms remained elevated throughout the post-bereavement period. The increase in consultations for non-psychiatric symptoms was most pronounced in the older widows, but that for psychiatric symptoms was confined to patients under the age of 65.

It is tempting to assume that these changes in consultation rate are all a direct consequence of grief, the specific response to the stress of bereavement. In order to establish this, however, it is necessary to answer the following questions: (1) Is there a true increase in the number of consultations with the G.P. after bereavement? (2) If so, does this reflect a true increase in morbidity? (3) If so, is this increase a consequence of the bereavement? (4) If so, is it a direct consequence of the bereavement?

1. Is There a True Increase in Consultations?

It is unlikely that the G.P.s were much more conscientious in their recording of consultations after the husband of one

of their patients had died, because of the means by which they were selected to assist with the study. Thus all kept regular records of their consultations, and a previous study (Parkes *et al.*, 1962) in which the dates of consultations were checked with the patients themselves showed that very few consultations were missed.

2. Is There a True Increase in Morbidity?

Because a woman attends her G.P. more often after the loss of her husband it does not necessarily mean that she is more ill. Thus she may have found it difficult to attend the surgery during her husband's last illness, or her preoccupation with a dying man may have taken her mind off her own ailments. Such considerations may account for the fall in the consultation rate for non-psychiatric symptoms which took place in the 65-and-over age-group during the last six months before bereavement (period 4 in Fig 4); but since this period was deliberately excluded from the control period it is unlikely that they affect the statistical findings. Another possibility is that a widow attends more frequently after bereavement because she lacks the support which a husband can give. She is in a more dependent frame of mind, and it may be that she is encouraged to attend by a G.P. who sympathizes with her lot and is prepared to devote more time to her care than he would otherwise do. Against this has to be balanced the effects of the undoubted hostility which many bereaved women feel towards the doctor who attended their husband during his last illness, and the social withdrawal which is a part of grief and was found by Marris (1958) in 75% of the widows whom he studied. My impression is that in younger patients the latter considerations outweigh the former, but it may be that the rise in the consultation rate for non-psychiatric symptoms can be explained in this way in the older age-group, who do not show the social withdrawal and other symptoms of grief which are so prominent among younger patients.

3. Is the Increase in Morbidity Necessarily Related to the Bereavement?

Three possibilities need to be considered in this connexion. Is the increased morbidity a consequence of ageing? Is it a consequence of the same pathogens which brought about the husband's illness? Is it a consequence of the stress of nursing a dying husband?

It has been shown that the ageing which took place between the mid-points of the pre- and post-bereavement periods could explain a 6% increase in the consultation rate. But a reduction of this amount would not affect the significance of the observed increases, which are all maximal during the first six months after the bereavement. In fact, however, the observed increases are very much larger than this, and in no case would a 6% reduction in the post-bereavement figures affect the significance of the increases. Furthermore, the increase in consultation rates takes place suddenly after the bereavement rather than after a gradual curve as we would expect if ageing were an important factor.

If "pathogens" is taken to mean "infective agents" then there is no reason to believe that the increase in morbidity among these widows was a consequence of cross-infection, since none of the husbands had died from an infectious disease. Similarly, none of them had died in an accident in which the wife had also been injured. If, on the other hand, we include among "pathogens" all those environmental stresses which might have contributed to the death of the husband, then the question is less easy to answer. In the present state of our knowledge it is seldom possible to decide just what the significant pathogens are in a case of, say, coronary thrombosis. The consensus of opinion seems to favour long-term dietary

factors, chronic tension and frustrations, and the like, rather than acute premorbid stresses, and it would be difficult to explain the sudden increase in the consultation rate of widows after bereavement as a result of such long-standing factors. One would expect, rather, to find the health of the wife deteriorating *pari passu* with that of her husband.

The influence of the stress of nursing a sick husband on the health of the wife is another factor which is not easy to assess. If the stress of nursing were an important factor then we would expect to find a rise in the consultation rate during the last six months before bereavement (period 4). In fact, however, there was a fall in consultations during this period, and the patients who nursed their husbands at home did not show a significantly greater increase in the consultation rate after bereavement than those who did not do so.

4. Is the Increase in Morbidity Directly Related to the Bereavement?

There are a number of consequences of bereavement which may themselves prove pathogenic and therefore bring about an indirect relation between bereavement and health. Among these must be included financial and other environmental changes and also the *absence* of the husband, the effects of which must be distinguished from the effects of the *loss* of the husband.

In the present study, so far as it was possible to ascertain them, major environmental changes following bereavement were remarkably few; most of the widows continued to live in the same home and to follow the same occupation, and financial difficulties, if present, did not come to the notice of the G.P. On the other hand, loneliness must have been considerable, since few had members of the family living with them. It may well be that this was the reason for the more enduring changes in consultation rate and sedative consumption which took place, although it would probably not explain the more transient increases which occurred during the early post-bereavement period.

The direct, primary consequence of bereavement is grief, and it was clear from the case-notes of the widows studied that in most cases the psychological symptoms which caused them to consult their doctor after bereavement were none other than those of typical grief. Thus the commonest complaints were of depression, anxiety, and insomnia, and there were frequent requests for sedatives or a tonic.

But grief may itself have secondary consequences, and these are of particular importance when we come to consider psychosomatic influences. The most obvious is the dietary change which results from loss of appetite; but the situation is further complicated by the influence of the psychological and autonomic components of grief upon metabolism and upon such poorly understood issues as "general health," "resilience," and "adaptive reserves."

It seems clear that the emotional disturbance caused by the loss of a husband in women under the age of 65 is a severe one which commonly leads the widow to seek help from her G.P. The form of help which is given usually consists in the administration of a sedative or hypnotic drug or a vitamin preparation. While the number of consultations for psychiatric symptoms falls off sharply after the first six months, the fall in sedative prescriptions is more gradual, and almost as many widows received such drugs during the third six months of the post-bereavement period as received them during the first six months. Since only three patients received these drugs regularly throughout the post-bereavement period, the prolonged high level of sedative administration is not explained by habit formation. It seems, rather, that insomnia is a symptom which is likely to persist or to recur long after the acute affective disturbance of grief has declined.

The finding that in women of 65 years and over neither consultations for psychiatric symptoms nor amounts of sedative prescribed increase to a significant extent after bereavement may be of considerable importance in our understanding of the psychology of old age. Stern, Williams, and Prados (1951) found a dearth of the overt manifestations of grief among 25 subjects who attended the Old Age Counselling Service of McGill University after a bereavement. They suggest that aged patients make use of defence mechanisms such as idealization of the deceased and that they "channel" material which would otherwise produce psychiatric symptoms into the form of somatic symptoms.

An alternative theory which would explain the lack of affective disturbance in old age has been propounded by Cumming and Henry (1961), who carried out intensive interviews with a random sample of 279 Kansas adults aged 50-70. They found that a process of "disengagement" takes place at around the age of 65 and that this results in a "mutual severing of ties between a person and others in his society." Considerations such as this have caused Lehrman (1956) to divide bereavements into the "timely" and the "untimely." It is untimely losses which he regards as pathogenic. The present study tells us little about the causes of the differences observed, nor does it enable us to decide between these theories.

The evidence for the influence of grief upon somatic illness is still inconclusive. Certainly there is good reason to believe that widows tend to consult their G.P.s about somatic complaints more often after bereavement than before it, and it seems very likely that the bereavement itself is a cause of a truly increased morbidity. But bereavement brings about secondary stresses and produces changes in attitude towards illness in doctors and patients which may well account for a part of these changes.

A general conclusion seems justifiable. Since loss of a husband is a stress which commonly causes a widow to consult her medical practitioner, it follows that the medical practitioner should have the knowledge to enable him to give whatever help is needed. Despite the small amount of research which has so far been carried out in this area something is known of the course, complications, and treatment of grief (see, for instance, Lindemann (1944), Marris (1958), and a useful pamphlet issued by the Cruse Clubs Counselling Service for Widows (1964) on "Caring for the Widow and her Family"). It is time, therefore, that the psychology of bereavement and the means by which help can be given to the bereaved were made a part of the medical curriculum.

Summary

The medical records kept before and after the bereavement of 44 unselected London widows were studied with the assistance of their general practitioners.

In widows under the age of 65 the consultation rate for *psychiatric symptoms* more than trebled during the first six months after bereavement. The increase was greatest during the first six months.

The amount of sedation prescribed to widows under the age of 65 was seven times greater during the 18 months after bereavement than it had been during the control period.

No such changes in the consultation rate for psychiatric symptoms and in sedatives prescribed were found among widows over the age of 65.

The consultation rate for *non-psychiatric symptoms* increased by nearly a half in both older and younger widows. This change in the consultation rate was most pronounced in the subgroup diagnosed "osteoarthritis," which increased by one and a half times after bereavement.

The likely explanations of the findings have been discussed, and it is concluded, *inter alia*, that grief is a syndrome which commonly causes the widow to seek help from her general practitioner. As yet little attention has been paid to it in the medical curriculum.

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