IMPAIRMENTS IN A RURAL POPULATION

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II. HISTORY DATA[1]

ONE of the first steps in the medical examination of a patient is that of obtaining the personal history. The history findings to some extent determine the character of the physical and laboratory examinations which follow, and all three usually contribute to the final diagnosis. Rather startling physical and laboratory findings may lose all their significance in the light of facts ascertained by the history survey, and certain such findings otherwise regarded complacently achieve grave significance in that light. The usefulness of history-taking is not, however, confined to qualifying other medical findings; the diagnosis of such conditions as mental disorders, chronic constipation, and dysmenorrhea may rest almost wholly on the history, although it must be confessed that negative physical and laboratory findings are important aids. The clinic physician, however, is particularly dependent upon history in determining the impairment status of a patient because he does not often see his patient during the course of characteristic attacks of periodically recurring conditions, such as epilepsy, asthma, and urticaria (hives), and because he may not be able to include in his routine special examinations, such as vaginal and rectal examinations, to establish diagnoses such as uterine displacement or hemorrhoids.

It is evident from the partial enumeration of impairments given above that history data must be taken into account in any analysis of impairment status, but there are a number of reasons for presenting them separately. Such data, unconfirmed by more extensive studies, have the same limitations that other unsupported medical

[1] This is the second in a series of notes on the physical status of a rural population. The first appeared in the Milbank Memorial Fund *Quarterly* for July, 1937.

findings have. The emotions, education, and intelligence of the patient impose many qualifications upon the reliability of the information he furnishes, and histories should properly be evaluated with no little regard for these factors. Furthermore, the character of the history itself is important, for upon its completeness as well as upon the manner in which the patient is questioned, depends much of the value of this part of the examination.

History-taking together with evaluating is thus a highly individual process which does not lend itself readily to statistical study. It must also be confessed that routine clinic history recording necessarily falls somewhat short of the ideal discussed above. However, patients were questioned upon leading symptoms which, when affirmatively answered, were further analyzed by more detailed questioning, so that in many instances a definite diagnosis could be made. Furthermore, the patient was encouraged at several points in the history-taking to offer data upon any of his past or present chronic illnesses which had already been diagnosed, and the accuracy of these diagnoses was verified with some care by further questioning.

It is here proposed to outline the responses, first, to the leading symptom questions which will be presented as asked and which will include cases which were subsequently proven to have ample physical basis as well as those found to have only an apprehensive basis or none at all. Finally, the diagnoses obtained in the course of history-questioning, which could not be verified by the physical or laboratory examinations in the clinic, will be given. These will be discussed with due regard for the limitations of such data, and are presented with the conviction that, despite these limitations, they offer quite reliable approximations to true prevalence.

In both instances and in much of the later analyses the data will be presented for the true sample and for the total sample (which latter includes the former but also includes a limited number of cases seeking medical aid). The prevalence data for the true sample

will, despite its name, be an understatement because from it have been excluded a certain number which would ordinarily be included in a random sample, while the total sample figures probably overstate prevalence to some extent. Because the true sample forms the major part of the total sample, the rates for both will not in general be widely divergent. This method of presentation has two advantages: first, it establishes only the limits of a rate which in the last analysis can never be measured exactly; and second, the degree of divergence of the two rates will indicate to some extent the type of symptom or condition for which the patient seeks medical advice in a rural area.

The percentages of persons giving affirmative answers to questions upon leading symptoms are given in Table 3. With two

Table 3. Percentages of all examined persons in the true and total samples with various leading symptoms elicited by history-taking.

Symptom	Number With Given Symptom		Percentage Mentioning Symptom[1]		Percentage Mentioning Symptom, Standardized for Age and Sex[2]	
	True Sample	Total Sample	True Sample	Total Sample	True Sample	Total Sample
Dizziness	70	200	8.9	15.8	10.2	14.7
Headache	156	330	20.2	26.0	20.9	25.4
Frequent or Prolonged Colds or Coughs	130	266	17.4	21.7	17.9	21.8
Shortness of Breath	90	238	11.8	19.0	13.1	17.3
Cardiac Pain	47	134	6.1	10.5	7.0	9.9
Constipation	126	301	16.4	23.7	17.4	22.6
Periodic or Habitual Use of Laxatives	103	250	13.4	19.6	14.3	18.7
Abdominal Complaints	111	254	14.7	20.1	15.9	19.2
Frequent Urination	59	132	7.8	10.6	8.7	9.7
Difficult or Painful Urination	20	57	2.6	4.4	3.1	4.0
Chronic or Recurring Skin Trouble	39	95	5.1	7.6	5.2	7.7
"Rheumatic" Pains	128	277	17.4	22.5	19.5	20.7

[1]The crude percentage has, however, been corrected for sex because of the larger proportion of women in both true and total samples and because of the usually higher proportion of women mentioning many of these symptoms.
[2]Standardized to rural population, United States Census, 1930.

exceptions (indicated in the text) these were not counted as defects for reasons to be given below. They will, however, serve to show to some extent the prevalence of disorders, frequently minor and often within normal limits, of various systems of the body.

Some question naturally arises about the significance of the various complaints or symptoms detailed in Table 3. *Dizziness,* on further questioning, was usually found to be associated with sudden change of posture in elderly persons and, as such, was not an entirely abnormal finding. The few instances in which it proved to be of more definite character usually showed some physical finding which indicated its significance. *Headache* includes a few cases with migraine and other recognizable syndromes, but in general it was found to be difficult to determine the significance. *Frequent coughs and colds* were found to be a somewhat miscellaneous group. The association of this with upper and lower respiratory defects will be discussed at greater length in a subsequent analysis. *Shortness of breath* was most commonly encountered in obese patients and could thus be attributed primarily to that cause. It was, however, occasionally found to have a definite cardiac or pulmonary background. *Cardiac pain* is a symptom more often encountered than verified. Only one case gave a definite enough description of this pain on more detailed questioning to make the diagnosis of coronary disease highly probable. This proved otherwise a frequent complaint of neurotic persons of all ages.

Chronic constipation was a frequent complaint at all ages and is one of the few, in this section of the history-taking, counted regularly as an impairment. *Use of laxatives* is here seen to be a fairly prevalent custom, possibly from the old rural tradition of routine purging. *Abdominal complaints* constitute an important group whose basic causes were very difficult to determine. A more extended study of these may reveal some relationship to constipation, use of laxatives, dental status, and other factors.

Frequent urination and *painful urination* are both symptoms of

urinary tract disease. In general they were complaints of adults and may be useful as an index of the prevalence of urethral stricture and of chronic prostatitis in males, of disturbances following childbirth in females. Neither of these conditions, relatively common in elderly men and women, were otherwise covered by history-taking. *Chronic or recurring skin trouble* was usually seen at the time of eruption and as such will be discussed in a later note. However, five cases of urticaria were recorded—a recurring condition not often seen in the clinic but accurately enough described to be fairly easily identified. The condition is probably more common than this number would indicate but individuals failed to mention it when questioned. *Rheumatic pains* were acknowledged by a surprisingly large proportion of individuals; the term "rheumatic" is loosely used by the laity and indeed by the medical profession. The responses may therefore be somewhat unreliable even though the more obvious cases of misuse of the term have been omitted from the tabulation. It was originally included because it was felt that joint changes, particularly in early cases of arthritis, cannot be determined by physical examination as readily as by history. For this reason, the response, except when palpably inaccurate as indicated by further questioning, was considered along with constipation as an impairment. Others in this table were only so counted when some other basis was discovered.

The impairments ascertained solely from history at the clinic are presented in Table 4. In some cases they have been grouped in broad classifications where it is felt that more detailed diagnosis could not be made on the basis of the routine examination or where it was found that very small numbers resulted. From the cases and diagnostic groups in Table 4 have been excluded all cases showing physical or laboratory findings confirming or interpreting the history obtained. While this may seem a somewhat arbitrary division, it at least serves to keep distinct the unsupported history data from those in which more objective findings corroborated the diagnosis.

The discussion of the individual items in Table 4 may most conveniently be done under system headings.

Nervous System. Under this division are included impairments of the mind and nerves without other findings. Classically, the mental disorders are subdivided into *mental deficiency* (morons and idiots), *psychoses* (loosely termed "insanity"), and *psychoneuroses* (neurasthenia, hysteria, etc.). Of the three groups only the first and third were diagnosed at the clinic. Some of the examinees had a record of attendance at mental hospitals and some attended subsequently for disorders in the second group, but the diagnosis was not made with certainty on a single case at the time of examina-

Table 4. Percentages of all examined persons in the true and total sample with conditions diagnosed primarily on the basis of history.

Condition or Class of Condition	Number so Diagnosed		Percentage so Diagnosed[1]		Percentage Standardized for Age and Sex[2]	
	True Sample	Total Sample	True Sample	Total Sample	True Sample	Total Sample
Nervous System						
Mental Deficiency	10	14	1.3	1.3	1.3[3]	1.3[3]
Psycho-neurosis	20	55	2.6	4.2	2.4	4.1
Other	9	28	1.0	2.3	1.0[3]	2.0
Respiratory System						
Bronchitis	37	85	5.2	7.1	5.7	7.2
Asthma	7	15	0.9	1.0	0.9[3]	1.0
Gastro-intestinal System						
Hemorrhoids	36	132	4.7	6.2	5.2	5.8
Other	9	25	1.2	2.1	1.2[3]	2.0
Diseases of Women						
Menstrual[4]	3	14	1.7	5.1	1.8	5.3
Other[5]	5	10	1.3	1.5	1.2	1.6
Skeletal System						
Lumbago and Backache	37	56	4.9	4.5	4.2	4.4

[1]The crude percentage has, however, been corrected for sex because of the larger proportion of women in both true and total samples and because of the usually higher proportion of women mentioning these symptoms.
[2]Standardized to rural population, United States Census, 1930.
[3]Sex correction only, because of limited numbers.
[4]Percentages based on the number of women examined, aged 15–45 years only.
[5]Percentages based on the number of females examined only.

tion. An important limitation of the figures here given is that mental institutions undoubtedly contained, at the time clinic examinations were made, a certain number of individuals from the area studied who would otherwise have been part of a random sample. This may in part explain the absence of psychotic patients and the fact that, athough there were a limited number of morons, no idiots were seen.

The remaining classification under nervous system impairments contains for the total sample a number of less easily classified conditions, as follows: neuritis and neuralgia, fifteen cases; migraine, twelve cases; epilepsy, one case. The first of these comprises two diagnoses very frequently mentioned by patients but allocated to other classes on further questioning in all but the fifteen cases noted. Migraine, though probably not primarily a disease of the nervous system, is included here for convenience. Epilepsy was also more frequently mentioned in the history than verified by closer questioning. In most instances the convulsive states were found to be acute ones in infants and wrongly attributed by the apprehensive mother to epilepsy. The single case entered here appeared to have been definite. Another case with periodic unconsciousness but without convulsions was diagnosed as a possible mild epileptic, but the diagnosis considered uncertain enough not to warrant inclusion. A third individual, with periodic seizures but with definite physical findings attributed to an old head injury, had what is sometimes termed "traumatic epilepsy" and will be discussed in the proper place. These cases with actual physical findings of nervous system disease were very few. Possibly the addition of a careful neurological examination would have extended the findings somewhat. In general, however, the detection of nervous system impairments in a routine clinic examination is largely a matter of careful history-taking, and extensions in this direction would seem more profitable than extensions of the physical examination.

Respiratory System. The nose, throat, bronchi, and lungs were carefully explored by physical examination and X-ray so that an objective basis was obtained for all but two diagnoses. The first of these, bronchitis, is said to be diagnosed more often than it actually occurs, so that it is with some trepidation that data on it are offered. No acute cases were included, but the prevalence figures suggest that subacute as well as chronic bronchitis make up the total. The other diagnosis, asthma, is represented by relatively few cases. This is a condition which varies somewhat in its prevalence from locality to locality and figures from another area might differ from those reported here. One other impairment should perhaps be included here—hay fever. This condition was usually not mentioned in history except when the person had it at the time of examination. It illustrates one of the limitations of history diagnosis as practiced at the clinic, namely, that minor impairments—even when handicapping as hay fever often is—are not spontaneously mentioned but have to be sought out quite carefully.

Gastro-Intestinal System. Except for inspection of the mouth and teeth, the diagnoses on this system were almost wholly made from history and many impairments were probably discounted because of the difficulties of making an accurate diagnosis upon this basis alone. The figures for *hemorrhoids* may be low, even in the total sample, as it seems probable that this condition is recognized and mentioned less often than it actually exists. Among *other conditions* for the total sample are six cases of chronic or recurring diarrhea diagnosed as colitis, and one case of gastric ulcer. The remainder of those cases which appeared troublesome enough to warrant impairment status in this subdivision (eighteen in all) were tentatively diagnosed as post-operative adhesions or chronic appendicitis.

Diseases of Women. The figures here refer primarily to particularly troublesome cases as the history was not framed to include this group of very prevalent impairments. Among *menstrual dis-*

orders for the total sample are included eleven cases of dysmenorrhea, one of amenorrhea, one of irregular menses, and one of menorrhagia. Leukorrhea, including one case previously diagnosed as having gonorrheal vaginitis, made up the total under the heading of *other* in this section.

Skeletal System. Most orthopedic impairments were fairly readily diagnosed on the basis of physical findings; however, a very troublesome group of lower spine complaints is to be found in the history division. A definite diagnosis was not attempted, and the complaints, when sufficiently localized, were grouped in this way.

The percentages in Table 3 are high in part because, as indicated above, they include a number of individuals whose symptoms are, all things considered, within normal limits. They also include a good many cases in which definite organic derangements were detected. The relatively small number who were found, on further questioning, to have defects diagnosed by history alone are also largely included in Table 3. However, the high percentages of this table indicate that there are many more persons with various mild disorders (some of which are psycho-neurotic) than can be diagnosed by a quite careful physical examination alone.

The percentages in Table 4 are of significance because they were obtained with more detailed sifting of the above data and because they include specific conditions whose prevalence is more often given as an estimate than as a result of medical observation.