

## HEALTH EDUCATION IN A CLINIC

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**I**NCREASING awareness has been developing in recent years among physicians, and particularly among general practitioners, of the importance of including health education within the framework of their daily clinical practices. Accompanying this awareness has been a growing appreciation both of the need for eliciting the perceptions and motivations of patients towards their illnesses, and of establishing more meaningful lines of communication with them in order to ensure maximal therapeutic effect. Furthermore, a number of authors (Steuart, 1961; Chesler, 1960) have emphasized the importance of including the subject of Health Education in the curriculum of both postgraduate and undergraduate medical studies in order to provide physicians with the basis necessary to implement the educational aspects of their work. Increasing interest has therefore been focused by a number of investigators on an analysis of the nature and quality of general practice (Logan, 1953; Peterson *et al.*, 1956), and the need to take into account popular 'medical' beliefs and practices has also been stressed by a number of authors (Cravioto, 1960; Pridan, 1962). Within the same area of interest have been the numerous investigations which have tried to ascertain the extent to which the patient's perception and assessment of his disease accords with the doctor's evaluation of the patient's illness. Examples of such studies can be found in Seligmann *et al.* (1957), Reader *et al.* (1957), and Pratt *et al.* (1957), who found a marked discrepancy between doctors' expectations of what they thought patients should know about their own diseases and what patients in fact did know about them. They also found a positive expression of interest on the part of the patients for receiving more knowledge

and information from their doctors than was in fact given to them. Another study (Kark *et al.*, 1956) showed that a very low percentage of the patients they investigated had been told anything by their doctors about the nature of their disease. Balint (1957), Herold (1961), and Cahal (1962), as well as Wax (1962), pointed out that the quality and nature of the doctor-patient relationship is one of the more important factors in the effective diagnosis and treatment of the patient. The literature in general seems to indicate the need for improved methods of educating the patient about his own behaviour in relation both to a particular illness and to illness in general. Several results would emerge from such education: first, maximum patient co-operation would be ensured; secondly, there would be a more sensible use of medical services by the population as a whole; thirdly, more effective patient care would be provided; and, finally, a considerable reduction of anxiety would probably take place (Steuart, 1958). Behind all these findings is the implicit assumption of the need for establishing satisfactory communication between doctor and patient.

In designing the present study, our objective was to examine both the nature and the extent of communication between doctors and patients in two Israeli clinical settings. The specific aspects of such communication in which we were interested were the following: first, the quality of transfer from doctors to patients about the name and nature of the patient's disease, the cause of the disease, its seriousness or lack of seriousness; this part of the contact we refer to as the 'educational' part. Secondly, the quality of transfer about the patient's understanding of the instructions given to him by the doctor in regard to treatment; this being regarded as the 'instructional' element. The following postulate was therefore tested in this study: "No difference will be found in the quality of transmission to the patient between the name, cause and seriousness of the disease on the one hand (the 'educational' component), and the instructions regarding care and treatment on the other hand (the 'instructional' component)."

### Methods

The study was conducted in two different clinics situated in the same neighbourhood, one a family-type practice and the other a general outpatient clinic. Patients were interviewed before and after seeing their doctor. Patients attending the clinic were interviewed in the order of their being received by the doctors, so that no bias in selection was introduced. Nine doctors were selected

for the investigation, representing a wide spectrum of medical training and background, ranging from English-speaking countries, European medical schools and graduates from the Hebrew University Medical School in Jerusalem (three from each group). This was done in order to eliminate the possibility of obtaining specific characteristics inherent in the medical training of only one type of medical school. The doctors concerned were fully aware that the study was in progress. It was conducted on different days of the week over a period of four weeks during September-October 1962, this representing a slack period in Israeli clinics. (Average patient/doctor/hour 4.5.) It was thus possible to conduct the study without introducing a major disturbance in the clinics concerned and without any fear on the part of the patients that they would miss their turn with the doctor. The interviews were carried out by two members of the department, well known to the majority of patients, a fact which both necessitated only a brief introduction about the purpose of the interview, and ensured to a great extent the co-operation of the patients, i.e. coming back for the second interview and the quick establishment of rapport and spontaneity of replies. No differences in the results of the two investigators were found.

The interview sheet covered the following areas:

1. Identifying data
2. First interview
3. Second interview
4. Doctor's diagnosis and treatment

The identifying data were kept to a minimum, first because once the identity of the patient had been established it was possible to obtain further details from the patient's records; and, secondly, in order to keep the interview as short as possible. The following data were recorded: age, sex and country of birth of the patient; country of birth of the father if the patient was a child; present occupation of the patient or of the head of the family; whether the present visit was a new one or a repeat visit for this particular illness; language spoken by the interviewer with the patient; identity of respondent (i.e. whether the patient himself, or the mother in the case of babies); date of interview; and name of attending physician.

After pre-testing the questionnaire, the following questions were finally included:\*

\*Pre-testing was done for the Hebrew version of the questionnaire only, and in those cases where translation into other languages was necessary, it was ensured that the questions were fully understood (51 Hebrew, 29 other languages).

In the interview before seeing the doctor the patient was asked:

1. What is wrong with you?
2. How long have you been ill?
3. What is the cause of this illness?
4. Do you think this illness is serious/dangerous?

In the interview after seeing the doctor the patient was asked:

1. What did the doctor tell you about:
  - (a) Name of the disease?
  - (b) Cause of the disease?
  - (c) Seriousness/danger of the disease?
2. Do you agree with what the doctor said about 1(a), 1(b) and 1(c)?
3. What were the instructions given you by the doctor?

At the end of each morning the doctors' diagnoses, treatment, and instructions were obtained either by extracting these from the patients' files, or by talking to the doctors concerned.

A total of 80 patients was interviewed.

### Definitions and analysis

No particular problems were encountered in the analysis of the results and most of the tables presented below are self-explanatory. Attention should be drawn, however, to the following points:

1. "Name of disease"—under this heading we recorded what either the patient or the doctor called the disease, whether in lay or professional terminology.

2. Instructions fully or partially understood or not understood: "Fully understood" covered an exact repetition by the patient of the instructions given him by the doctor in regard to drugs prescribed (tablets, drops, etc.), periodicity of using these drugs, length of time for which the drugs were to be taken, dietary instructions, instructions relating to laboratory examinations. If any of the above instructions was omitted by the patient, his answer was classified as "partially understood". "Not understood" covered those patients who were not able to repeat any of the instructions given them by the doctor.

"Fully understood" was regarded as a successful transfer, "partially understood" and "not understood" as unsuccessful transfer.

3. In order to arrive at an objective assessment of the seriousness/danger of the disease, the classification evolved and tested by Eimerl (1962) was used in an adapted form:

- (a) *Trivial*—self-limiting condition, no treatment necessary, no restriction

on patient's usual activities.

- (b) *Acute ordinary*—length of illness up to one week, treatment usually necessary, bedrest for 2-4 days indicated.
- (c) *Acute serious*—bedrest up to a fortnight, treatment necessary, possible danger to life.
- (d) *Chronic ordinary*—length of illness over three months, treatment usually necessary, very little or no limitation of patient's functions, no danger to life.
- (e) *Chronic serious*—length of illness over three months, treatment necessary, appreciable limitation of patient's functions, possible danger to life.

In those cases in which the doctors had recorded a presumptive diagnosis (eight cases), the analysis was made as if a positive diagnosis had been reached. No disease, trivial, acute ordinary, and chronic ordinary were grouped under the category of "Not Serious/Not Dangerous" conditions.

Acute serious and chronic serious were classified as "Serious/Dangerous" conditions.

This classification was evolved in order to arrive at some way of comparing, as objectively as possible, the doctor's own assessment of the seriousness of the condition, with that of the patient's assessment of his condition.

4. "Shift"—a shift was considered to have occurred when a patient changed his answer to the question regarding name, cause, seriousness/danger of his disease between the first interview and the second.

### Findings

The main findings of the study were as follows:

1. *Table I*: The diagnoses and their classification.
2. Shift occurred in the following instances: name (6), cause (2), seriousness/danger of disease (8); of the latter four shifted from not serious to serious, and four from serious to not serious.
3. *Table II*: Number of patients who reported that the doctor had mentioned name, cause or seriousness of disease.
4. Of the patients diagnosed with serious disease according to our classification, three assessed their disease as serious, and four as not serious. Of the patients diagnosed with not serious disease according to our classification, 42 (60.9 per cent) assessed their disease as not serious, and 27 (39.9 per cent) as serious/dangerous (confidence level 1 per cent; 2.33 S.E.  $\pm$  13.8 per cent).
5. Out of 76 patients, 58 (76 per cent) had understood their instruc-

TABLE I  
THE DIAGNOSES AND THEIR CLASSIFICATION

<i>None/trivial</i>	<i>Acute ordinary</i>	<i>Acute serious</i>	<i>Chronic ordinary</i>	<i>Chronic serious</i>
Mild neuritis .. 1	Ac. tonsillitis .. 6	Bronchopneumonia 1	Chron. pharyngitis 1	Chr. spas. bronchitis 1
Common cold .. 11	Pruritus ani .. 1		Dyspepsia .. 4	Malignancy .. 1
Myalgia .. 4	Oxyuriasis .. 3		Chron. sinusitis .. 1	Rheum. h. disease 1
Headache .. 1	Allergic rash .. 1		Spastic colon .. 1	Pyelonephritis 1
Old scar (esthet) .. 1	Ac. gastro-enter. 8		Chron. gastritis .. 1	after nephrectomy 1
Ac. pharyngitis 6	Infec. wound .. 1		Functional heart 1	Cervc. disc lesion 1
Insect bites .. 1	Contusion .. 4		murmur .. 1	Ac. rheum. fever 1
Abrasion .. 2	Ac. otitis media .. 1			
No disease .. 4	Ac. cystitis .. 2			
	Low back strain .. 1			
	Sciatica .. 1			
— 31	— 29	— 1	— 9	— 6

No disease—trivial—ac. ordinary—chron. ordinary .. 69  
 Acute serious—chronic serious .. 7  
 Diagnosis deferred .. 4  
 — 80

tions fully, 15 (20 per cent) partially, and three (4 per cent) not at all.

6. No difference was found between the new cases and the repeat cases in regard to the understanding of instructions.

TABLE II

NUMBER OF PATIENTS WHO HAD REPORTED THAT THE DOCTOR HAD MENTIONED NAME, CAUSE OR SERIOUSNESS OF DISEASE

	<i>N.</i>	<i>Per cent</i>	<i>Confidence level 5 per cent; 2 S.E.</i>
Name .. .. .	33	43.5	± 11.4 per cent
Cause .. .. .	12	15.8	± 8.2 per cent
Seriousness/danger ..	25	33.8	± 10.8 per cent

McNemar's Test: Name—cause  $\chi^2 = 17.4$  P < 0.001  
 Cause—seriousness  $\chi^2 = 10.0$  P < 0.01  
 Name—seriousness  $\chi^2 = 3.2$

7. *Table III*: Analysis of successful or non-successful transfer of name, cause and seriousness of disease in comparison with successful or non-successful transfer of instructions.

TABLE III

NAME, CAUSE AND SERIOUSNESS ANALYSED IN TERMS OF A "GUTTMAN SCALE"

None .. .. .	37
Name (Name + cause + seriousness)	9
Seriousness (Name + seriousness)	10
Cause (Name)	12
	—
	68
Deviants: Name + cause .. .. .	2
Cause + seriousness .. .. .	1
Seriousness .. .. .	5
Cause .. .. .	0
	—
	8
Coefficient of reproducibility: 96 per cent	

8. *Table IV*: Name, seriousness and cause of disease analysed in terms of a "Guttmann scale (1959)."

A "Guttmann scale" means that the elements analysed show an interdependent association in a certain descending order; in other words, name could be mentioned on its own; in case the seriousness

was mentioned, most probably name was also mentioned; in case cause was mentioned, it was most probably done in conjunction with name and seriousness. Other possible combinations, as can be seen from the table, are extremely unlikely. A coefficient of reproducibility of 96 per cent means that the chances that these combinations will occur again in the outlined order are extremely high.

TABLE IV

ANALYSIS OF SUCCESSFUL OR NON-SUCCESSFUL TRANSFER OF NAME, CAUSE AND SERIOUSNESS OF DISEASE IN COMPARISON WITH SUCCESSFUL OR NON-SUCCESSFUL TRANSFER OF INSTRUCTIONS

	<i>Instructions understood</i>				<i>Total</i>	<i>McNemar's test</i>
	<i>Fully</i>	<i>Partially</i>	<i>Not</i>	<i>Partially + Not</i>		
Name + ..	26	6	1	7	33	$\chi^2 = 14.7$ P < 0.001
Name — ..	32	9	2	11	43	
<b>Total ..</b>	<b>58</b>	<b>15</b>	<b>3</b>	<b>18</b>	<b>76</b>	
Cause + ..	9	3	0	3	12	$\chi^2 = 38.9$ P < 0.001
Cause — ..	49	12	3	15	64	
<b>Total ..</b>	<b>58</b>	<b>15</b>	<b>3</b>	<b>18</b>	<b>76</b>	
Seriousness +	18	6	1	7	25	$\chi^2 = 21.7$ P < 0.001
Seriousness —	40	9	2	11	51	
<b>Total ..</b>	<b>58</b>	<b>15</b>	<b>3</b>	<b>18</b>	<b>76</b>	

### Discussion and conclusion

As can be seen from table III, statistical analysis of the findings forces us to reject our null hypothesis at a very high level of probability (P < 0.001). In other words, the number of successful transfers from doctor to patient in regard to instructions was found to be significantly higher than the number of successful transfers in regard to knowledge of the name, cause, and seriousness of the patient's disease. These findings were tested in our study through the patients only, since we were interested in the patient's testimony of his subjective impression of the doctor-patient contact. We are, of course, aware that these interviews will not have reflected the "objective reality" of the contact as seen by the doctor, but it is the patient's perceptions which, in the final analysis, are of importance. Our study showed that in very few cases indeed had any 'shift' oc-

curred in the patient's perception of the name, cause, and seriousness of his disease; furthermore, in 57 per cent of the cases the patient stated that the doctor had not said anything about the name of the disease, in 87 per cent of the cases the cause of the disease had not been mentioned, and in 65 per cent of the cases no mention had been made by the doctor of the seriousness of the disease. In other words, no apparent attempt had been made by the doctors to ascertain the patient's perception of the name, cause, and seriousness of his disease, and therefore to 'shift' him, where this might have been necessary. On the other hand, 76 per cent of the patients had understood their instructions fully when this was judged by the application of very strict criteria, and 20 per cent had understood their instructions partially.

In light of the above findings, the question must be asked whether a patient who has fully understood his instructions will carry them out blindly and automatically, without sufficient knowledge on his part about the nature and cause of his disease. In our opinion, the patient's co-operation will be ensured only in the case of a high degree of understanding, as well as positive motivations, on his part. Here it might be argued that in a clinic situation the patient mainly seeks authoritative guidance and instructions from the doctor and will be ready to be 'educated' only when he has recovered from his illness. Here may lie the underlying cause for what appears to be a certain pattern which has been established by the doctors in our study for handling their patients. If this argument is to be accepted as valid, our study should have reflected a significant reduction of anxiety on the part of the patient about his disease at the conclusion of his interview with the doctor. This, however, was not found to be the case; on the contrary, taking the patient's perception of the seriousness of his disease as an indication for possible anxiety, we found that 40 per cent of the patients diagnosed in terms of our suggested classification as having a non-serious condition, nevertheless left the clinic under the impression that they were afflicted with a serious illness. One other point should be considered here: it is often submitted by general practitioners that they do not have the time within the framework of their daily practice to 'educate' their patients. Under certain circumstances this contention might have some justification, although the present study shows that even under favourable conditions the educational components seem to be strikingly neglected. It seems to us, therefore, that it is not lack of time but rather the general attitude of the doctors, the various

assumptions which they hold (perhaps incorrectly) about what the patient wants, and finally, simply a lack of knowledge on their part about how to introduce the educational component into their daily practice.

The two clinics investigated in this study are not, in our opinion, unique in the Israeli clinic situation, and we have the feeling that what we have found here has general applicability to most clinics of this type. Furthermore, the published work of other investigators emphasizes, directly or indirectly, the results of the present investigation. The methods used here could be followed in further studies in order to shed additional light both on our understanding of doctor-patient relationships, and of health education in general practice.

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