

Diabetic Patients

What Takes them to Hospital ?

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THE investigators, while accompanying Post-Basic B.Sc. Nursing students in their clinical field have observed that quite a few diabetic patients were repeatedly admitted to the hospital. This has created an inquisitiveness to find out the actual factors that lead the diabetic patients to seek admission to the hospital.

In order to verify the observations, record review of diabetic patients' admission in 1976 was done. The following factors were revealed. Total number of admissions of diabetic patients were 555, out of which 43 patients were admitted twice, two patients three times and four four times. The average expenditure per patient per day was estimated as Rs. 20 in 1976.

These 49 patients were hospitalized for 1837 days. The total expenditure incurred on these 49 patients for 1837 days was estimated at Rs. 36,740.

"It is an established fact that effective control of chronic diseases like diabetes mellitus occurs most often in an informed, co-operative patient".¹ A diabetic has the control of his therapy in his own hands with the physician merely acting as a consultant".² If it is so, what makes a diabetic patient seek refuge in the hospital repeatedly, is something to be explored.

Review of the Literature

The need-demand relationship shows that consumer response is obviously influenced by factors such as the accessibility of the service in terms of distance, time and cost, quality of services and their desirability from the consumer's point of view. In another study, *Who is Teaching the Diabetic?* (1967), it is reported that proper control can be achieved only by well-informed patients co-operating with interested and knowledgeable nurses, dietitian and physician.

Recent studies on community demands in both developed and developing countries have shown that the consumption of medical care is related to such factors as age, sex, distance from the hospital, standards of living, family income, education and health insurance care.³

In many chronic diseases the life of the patient may depend on his own participation in the treatment regimen. It may include understanding of his disease to control it and complying with the regimen prescribed by the doctor.²

Several studies have demonstrated that both old and new diabetics were distinctly deficient in knowledge of their diseases and needed more information.⁴ Those who have more knowledge about diabetes manage their condition better than those without this knowledge.⁵

In an exploratory study of 'Reinforcement of Inde-

pendent and Dependent Patient Behaviours by Nursing Personnel,' the framework of the operant theory of behaviour is selected. The operant theory advocates that behaviour is governed by its consequences.⁶

A 'Comparative Study of Diabetes Knowledge among Juvenile Diabetics and their Patients' (1971) did not support the contention that when the mother has a high level of education both she and the daughter with diabetes will assimilate greater diabetes knowledge than when the mother has less formal education. It was further thought that the presence in the family of parents or siblings who were diabetic might be an influencing factor in the knowledge scores.⁷

Purpose of the Study

A review of the literature related to the factors for consumption of medical care, nature of diabetic patient's knowledge and its effect on the control of his chronic disease, influence of a family member with diabetes on the knowledge of diabetes indicated that there is a need for further investigation to identify the factors responsible for seeking admission in the hospital from the diabetic patient's point of view.

The Objectives are :

1. To find out the relationship between educational level and knowledge of diabetes.
2. To find out the relationship between knowledge of diabetes and number of admissions.
3. To assess the relationship between income and admission.
4. To verify the relationship between proximity to the hospital and admission.
5. To find out the relationship between patient with family history of diabetes with his level of knowledge of diabetes.

Assumptions

This study was developed on the basic assumptions that:

- (a) The diabetic patients who have more knowledge about diabetes manage their condition better than those without this knowledge.
- (b) The utilization of medical facilities is related to such factors as age, sex, distance from hospital, standard of living, family income, education and health insurance cover.

Hypotheses

The following hypotheses were formulated:

1. Patients with higher education will score more in the knowledge of diabetes than those with less education.
2. Patients with higher score in the knowledge of diabetes will have less tendency to get admitted.

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3. Patients with more income will be less inclined to seek refuge in the hospital.

4. Those patients living nearer to the hospital will have less inclination to get admitted.

5. The patients with family history of diabetes will score more in the knowledge of diabetes than those with no family history of diabetes.

Methodology

Selection of Sample: Since record review of 1976, as mentioned earlier, showed the maximum number of patients admitted to the hospital fell between the age group of 45 to 64 years, the male and female patients of that age group from both medical and surgical wards of the Civil Hospital, Ahmedabad were selected.

The Tool

A questionnaire was developed in the regional language. Content validity of the items in the questionnaire was achieved by having a team of medical-surgical specialists of Civil Hospital, Ahmedabad to judge their relevance for inclusion. The questionnaire included mainly educational level of patients, family history and patients' history of disease, knowledge about the disease, source of instructions/information received about the disease, income, details of admission/admissions, occupation, and distance from hospital. A key answer was prepared for ten questions in the questionnaire dealing with the knowledge of diabetes. The tool was tested by administering to three patients other than the sample population in the wards of Civil Hospital, Ahmedabad.

Procedure

The study sample was drawn from the diabetic patients of the Civil Hospital, Ahmedabad in the month of June 1978. The purpose of the study was explained to the sample population by the investigators. Verbal permission from each patient was obtained and the questionnaire was given to 19 patients (male and female). The investigators read out the questionnaire to the patients who were not in a position to read and write and noted down their answers in the questionnaire.

Findings and Interpretation

The patients were grouped according to their educational level. Those patients with no schooling were considered as illiterate, those studied upto fourth class were taken as with primary education and from five to seven classes as Middle School and those with eight or above were considered as with High School education.

TABLE I
Educational level, average score in knowledge of diabetes and average admissions

Educational level	No. of patients	Average score in knowledge of diabetes	Average Admission
High School	5	6.20	5.40
Middle School	5	4.40	2.60
Primary School	4	3.25	1.50
Illiterate	5	3.60	1.60

The findings in Table I indicate that patients with high school education scored better than the patients with middle school education. Patients who were illiterate scored better than those who had primary education. For primary and illiterate groups the average score is influenced by one illiterate subject scoring seven out of ten in the knowledge of diabetes.

It was anticipated that patients with higher score in the knowledge of diabetes would have less tendency to get admitted. Results showed that the patients with the highest average score in the knowledge of diabetes were also having the highest average admission.

The interpretations of these results from Table I might be: 1. the level of education beyond Middle School can influence the level of knowledge of diabetes; 2. neither educational level nor knowledge level had control over the number of admissions.

The patients were categorized according to their income upto Rs. 600 as Group I and from Rs. 601 upto Rs. 1,500 as Group II. 13 patients came from Group I and six from Group II. The average admissions to Group I was found to be 3.15 and for Group II 1.33. This indicates that patients with more income will be less inclined to seek refuge in the hospital.

Patients were grouped according to the distance from Civil Hospital, Ahmedabad to their residences: those living within five kilometers and those living beyond five kilometers. Seven patients were living within five kilometers and 12 were living beyond five kilometers. The average admission for those living within five kilometers was 1.86 and 3.41 for those living beyond five kilometers. This suggests that the diabetic patients residing nearer to the hospital do not seek hospitalization as often as those living at far off places.

There were five patients with family history of diabetes and 14 patients with no family history of diabetes. The average score in the knowledge of diabetes for those with family history was 5.80 and for those with no family history was 3.92. This indicates that the patients with family history score more in the knowledge of diabetes than those with no family history of diabetes.

It is observed from the findings that the factors that are mainly responsible for seeking admission to the hospital are relatively less income of the patient and a greater distance from the hospital. The educational level of the patient or the knowledge level has very little influence on the number of admissions of a diabetic patient.

Limitations

Data collected from a limited number of patients in one hospital cannot be generalized but can be utilized to identify some of the major factors that lead a diabetic patient to seek admission.

Another limitation of the study is the availability of limited time and other facilities at the disposal of the investigators to collect data from other hospitals.

The number of sample population was limited in the study because of the internal problems in the Civil Hospital. The total number of admissions was comparatively less during the month of June 1978.

Recommendations

A similar study with a large population in different hospitals might be advisable. To confirm the relationship between the educational level and the rate of admission a progressive study of patients attending regularly in the outpatients' department of the hospital and their rate of admission is to be carried out.

Nursing Implications

It is suggested that when the patient is discharged from the hospital, information should be given about the medical aid available at the nearest possible place.

Repeated teachings through different media about different aspects of care and control of diabetes have to be carried out.

Conclusion

This study in Civil Hospital, Ahmedabad shows that relatively less income of the patient and greater distance from the hospital are the two main factors responsible for seeking admission to the hospital. The knowledge of the diabetic is influenced not only by the educational level but also by many other factors as family history, previous admissions to the hospital and information received from other sources. Increase in the level of

knowledge does not have any direct influence on the patient's admission.

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