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TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING ON KNOWLEDGE REGARDING HEALTH MAINTENANCE OF SICKLE CELL ANEMIA AMONG SICKLE CELL ANEMIA PATIENTS.

Nursing

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ABSTRACT

Sickle cell anemia is a severe hemolytic anemia that results from inheritance of the sickle hemoglobin gene. This gene causes the hemoglobin molecule to be defective1.Objectives were to assess the existing knowledge regarding health maintenance of sickle cell anemia among sickle cell anemia patients. To assess the effectiveness of planned teaching on knowledge regarding health maintenance of sickle cell anemia among sickle cell anemia patients. To associate the post test knowledge scores with selected demographic variables. The study design was pre experimental one group pre-test and post-test research design and quantitative research approach. This study was conducted in selected areas of Wardha District, Maharashtra. Results indicate that the planned teaching was effective tool for improvement of knowledge regarding health maintenance of sickle cell anemia among sickle cell anemia patients.

KEYWORDS

sickle cell anemia, knowledge and effectiveness.

INTRODUCTION

Sickle cell disease (SCD) (known also as sickle cell anemia or sickle cell disorder), is an inherited blood disorder and also referred to as a haemoglobinopathy. It is caused by a single misspelling in the DNA instructions for hemoglobin, a protein vital for carrying oxygen in the blood. The disease damages and changes the shape of red blood cells (RBCs). The change in shape is a response to cell deoxygenation. When the oxygen uptake of the cell is low, cells change their shape from a healthy round disk to a crescent, holly leaf or other similarly distorted shape. This shape distortion is referred to as sickling. Hence, the disease is known as sickle cell disease. The sickled cells are rigid, less malleable and stickier than normal, healthy cells, so they consequently may stick to each other and obstruct blood vessels or are not sufficiently malleable and obstruct blood vessels. This obstruction causes harsh and painful complications. Often, these red blood cells will also break down and cause anemia, so we also refer to the disease as sickle cell anemia. Consequent to the breakdown of red blood cells (haemolysis), cell survival may be reduced to as little as twenty days, whereas a normal red blood cell will last anywhere from 110-120 days[2].

The prevalence rate of sickle cell carriers are 1 to 40 percent from different tribal groups. The sickle cell gene is widespread in all the eastern districts in Maharashtra i.e. from Vidarbha region and also some parts of Marathwada the prevalence rate of sickle cell carriers are 0 -35 percent from different tribes[3].

The normal life expectancy of red blood cell is 90 to 120 days but in sickle cell disease, it is only for 10 to 20 days because of this person feel tired. In sickle cell disease the red blood cell become misshapen called sickle shaped. These abnormal cells can also stick to vessels wall, causing blockage that will slows or stops the flow of blood when this happen there is problem with oxygen. The nearby tissue will not get sufficient oxygen this cause sudden or severe pain. This will cause without getting any hint. This all sudden conditions need proper treatment and hospitalization. For the prevention sickle cell anemia there is need to give proper knowledge and counseling about the sickle cell disease. The person with sickle cell who conceived the child they should also treated properly for the prevention of further disease[4].

MATERIALAND METHODS

The aim of the study is to assess the effectiveness of planned teaching on knowledge regarding health maintenance of sickle cell anemia among sickle cell anemia patients.

Objectives:

1) To assess the existing knowledge regarding health maintenance of sickle cell anemia among sickle cell anemia patients. 2) To assess the effectiveness of planned teaching on knowledge regarding health maintenance of sickle cell anemia among sickle cell anemia patients. 3) To associate the post test knowledge scores with selected demographic variables.

Methodology: Pre-experimental one group pre-test, post-test design was planned to assess the knowledge of sickle cell anemia patients regarding health maintenance of sickle cell anemia in selected area of Wardha district.

Design and Sample: Pre-experimental research design was used. The sample size was 60 of both males and female patients were included between the age group of 18 years to more than 42 years for the study. All questions were administered to the patients to provide the information on their medical history of sickle cell disease and heath maintenance of sickle cell disease.

Data Collection: The subjects were explained about the nature and purpose of study. A written consent was obtained from the participants prior to their recruitment in the study. They were assured about the confidentiality of the data. Self administered multiple questionnaire of 24 items were administered to individual patient.

Ethical consideration:

The study was carried out after obtaining permission from the Institutional Ethics Committee (IEC), Datta Meghe institute of medical sciences (Deemed to be university) Sawangi (Meghe), Wardha.

OBSERVATIONS AND RESULTS:

Table no.1: Showing frequency distribution of socio-demographic variables among sickle cell anemia patients.

n=60

Age in year	Frequency	Percentage (%)
a. 18-25	19	31.67
b. 26-33	25	41.67
c. 34-41	10	16.66
d. 42 and above	06	10.00
Gender		
a. Male	26	43.33
b. Female	34	56.67
Education		
a. Up to 12th	16	26.67
b. Graduate	20	33.33
c. Post graduate	14	23.33
d. Higher than post graduate	10	16.67

Source of knowledge		
a. Health professional	11	18.33
b. TV/Radio	25	41.67
c. Internet	16	26.67
d. Friends/Family	08	13.33
Marital status		
a. Married	28	46.66
b. Unmarried	20	33.33
c. Divorce	07	11.67
d. Separated	05	08.34
Any other health problem		
a. Yes	55	91.66
b. No	05	08.34
On medication of sickle cell disease		
a. Yes	35	58.33
b. No	25	41.67

Above table shows that majority of the, 31.67 % samples were from the age group of above 18-25 years, 41.67 % samples were from the age group of 26-33 years, 16.66% samples were from age group of 34-41 years and remaining 10% samples were from the age group of 42 and above. Majority of the 43.33 % samples were males and remaining 56.67 % samples were females. Majority of the 26.67 % belongs to up to 12th education, 33.33% belongs to graduation, 23.33 % belongs to post graduation, 16.67 % belongs to higher than post graduate. Majority of the, 18.33 % have knowledge from health professional, 41.67% from TV/Radio, 26.67% from Internet, 13.33% from Friends/Family. Majority of the 46.66% were married, 33.33% were unmarried, 11.67% were divorce and 08.34% were separated. Out of 60 samples majority 91.66% were having other health related problems.Majority of the, 58.33% are on medication of sickle cell disease and 41.67% are not on medication of sickle cell disease.

Table No. 2: Significant association between pre-test and post test knowledge regarding health maintenance of sickle cell anemia among sickle cell anemia patients.

n=60

Tests	Mean score	SD	't'-value	Degree of Freedom	p-value	Significant
Pre Test	7.50	±1.408	50.044	59	0.001	S, p<0.05
Post Test	19.48	±2.439				

Table no. 2 reveals that the overall mean knowledge scores of pre-test and post-test of patients which reveals that post-test mean knowledge score was higher 19.48% with SD of ± 2.439 when compared with pre-test mean knowledge score value which was 7.50 % with SD of ±1.408. The statistical student's paired 't' test implies that the difference in the pre-test and post-test knowledge score found to be 50.044 which is statistically significant at 5% level of significance($p<0.05$). Hence it is statistically interpreted that planned teaching on knowledge regarding health maintenance of sickle cell anemia among sickle cell anemia patients was effective.

DISCUSSION

In present study we found that 11(18.33%) have poor level of knowledge score, 49(81.66%) have average level of knowledge score, none of them had good level of knowledge score and noon of them had very good level of knowledge score. The minimum score was 2 and the maximum score was 9, the mean score was 7.50 ± 1.408 with a mean percentage score of 31.25 %.

Study conducted by Adewoyin A.S., Alagbe A.E. et.al out of 370, most of the respondents (63.5%) had a fair knowledge of sickle cell disease. Only 49(17.8%) of the respondents had good knowledge of SCD. The mean knowledge score among the respondents is 12.49 ± 4.75[5].

In present study we found that none of them had poor level of knowledge score, 2(3.34%) have average level of knowledge score, 18(30.00%) have good level of knowledge score and 40(66.66%) have very good level of knowledge score. The minimum score was 12 and the maximum score was 23, the mean score was 19.48 ± 2.439with a mean percentage score of 81.16%.

Study conducted by Hussain A, Suwaid A et.al out of 300 participants completed their questionnaire. In general, 56.3% had poor knowledge of the disease. About 58.3% had good knowledge of the genetic transmission. The knowledge of 46.7% about the precipitating factors was poor. Moreover, 59.3% had poor knowledge of the diet of people with Sickle cell disease and 81.3% had poor knowledge of the diet of people with G-6-PD deficiency[6].

In present study we found that there is a significant difference between pre-test and post-test knowledge scores interpreting effectiveness of planned teaching on knowledge regarding health maintenance of sickle cell anemia among sickle cell anemia patient.

Study conducted by Carlton Haywood, Lanzkron Sophie, two-hundred ninety one people participated in the IMPORT study and provided enough data for inclusion in our analytic sample. The majority of participants (54%) are female with a mean age of 34.5. Nearly two thirds (65%) of the participants reported a high school or less level of education. Thirty-eight percent of the participants perceived their health status as being poor or fair, while 54% of the participants reported daily chronic pain. A little over half of the respondents reported prior participation in a clinical trial[7].

CONCLUSION:

Hence it is concluded that the planned teaching on health maintenance of sickle cell anemia was effective in improving the knowledge of sickle cell anemia patients.

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