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"AN EXPLORATORY STUDY TO ASSESS THE KNOWLEDGE REGARDING THALASSEMIA AMONG FIRST YEAR B.Sc. NURSING AND FIRST YEAR GNM STUDENTS OF JG COLLEGE/SCHOOL OF NURSING, AHMEDABAD, GUJARAT."

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ABSTRACT

Background

Thalassemia is genetic disorder inherited from parents. There are two main parts, Alpha Thalassemia and Beta Thalassemia. The severity of alpha and beta Thalassemia depends on how many of the four

genes of alpha globin or two genes for beta globin are missing. Diagnosis is typically by blood test including a complete blood count, special hemoglobin tests, and genetic tests. Diagnosis may occur before birth through prenatal testing.

Thalassemia is a disease of blood in which there is increase in destruction of red cells. There are various severities of the disease from Thalassemia minor as an asymptomatic carrier state with patients of Thalassemia intermedia in between.

Objectives:

- To assess the knowledge regarding Thalassemia among First Year B.Sc. and GNM students of JG College/School of Nursing, Ahmedabad.

Method:

The research approach used in this chapter is exploratory survey approach. The research tool has been validated by 5 speciality experts. Reliability of research tool has been assessed by statistical analysis. Research design is exploratory survey. Pilot study with 10 samples was conducted in Shrey College of Nursing & Allied Sciences, Ahmedabad, Gujarat. For main study 100 samples were selected from JG College of Nursing by convenience sampling method for research purpose.

Result

Result shows the demographic information of the samples among which 42(36%) samples were from the age group of 17 years, 48(45%) samples were from the age group of 18 years, 08(15%) samples were from the age group of the 19 years, 02(04%) samples were from the age group of 20 years. Majority of the samples were females i.e., 90(14%), whereas only 10(86%) samples were male. Majority of the samples were Hindu 90(90%), Muslims were 2(2%), Christian were 8(8%), and others were 0 (0%). The demographic information of the samples among which 61(64%)samples were from first year B.Sc. nursing, 39(36%) samples were from first year GNM , 0(0%) samples were from first year m.sc nursing and post basic nursing. The demographic information of samples among which 80(70%) samples done their Thalassemia test and 20(30%) samples not done the test of Thalassemia.

Conclusion

The main aim of this study was to assess the knowledge regarding Thalassemia among First year B.Sc. Nursing students and First year GNM students. The spread of Thalassemia can be halt by using preventive measures. Thus, there could be improvement in health status of the students of aged 17-20 year. It mainly also focused on decreasing the mortality and severity of complication among the students of aged 17-20 years.

Introduction

Historically is believed that the defective gene originated from near the Mediterranean region, hence the name 'Thalas' means 'Sea'. It is found in many countries of Europe, and Asia including India. Treatment depends on the type and its severity. Treatment for those more severe disease often includes regular blood transfusion, Iron chelation and folic acid. Iron chelation may be done with deferoxamine or deferasirox occasionally, a bone marrow transplant may be an option. Complication may be including iron overload from the transfusion resulting in heart or liver disease, infection or osteoporosis. If spleen becomes overly enlarged, surgical removal may be required. Hydroxyurea is the only FDA approved drug for Thalassemia. Patients who took 10 mg/kg of hydroxyurea everyday for a year had significantly higher hemoglobin levels and it was a well-tolerated treatment for patients who did not respond well to blood transfusions.

Thalassemia is one of the most common single gene disorder in our country. Every year around 100000 children were born with Thalassemia major in the world and around 10000 are born in India alone. The carrier rate of 'B' Thalassemia gene varies between 1-2% in South India and 5-15% in North India. The disease was previously considered as the fatal before 2nd decade of life. The combination of transfusion therapy and chelation therapy has dramatically extended the life expectancy of the children with B Thalassemia major who can now live into the third and fourth decades. The only curative treatment available is Stem Cell Transplantation. It is not affordable in countries like India. But the frequent blood transfusion has in turn lead to various complication specially in developing countries like India where the compliance is very poor primarily due to financial reasons.

Objectives of the study:

To assess the knowledge regarding Thalassemia among First Year B.Sc. and GNM students of JG College/School of Nursing, Ahmedabad.

Method:

Sampling is necessary because it is more economical and efficient to work with a small group of element. A sample consists of a subset of the units that compose the population. During Pilot study, 10 students were randomly selected, respective concerns were taken and survey was conducted from the Shrey Institute of Nursing and Allied Sciences. Main study was conducted in JG College/School of Nursing. For that, 100 samples were taken by convenient random sampling method. Respective concern was also taken by students and then survey was conducted.

SECTION - I: DEMOGRAPHIC DATA

- **Age:** The data that is collected, Among which 100% samples were in the age of 17- 20 years.

- **Gender:** The data that is collected, Among which 90% samples were females and 10% samples were males.
- **Religion : :** The data that is collected, Among which 90% samples were Hindu , 2% samples were Muslims , 8% samples were Christian .
- **Current branch of study:** The data that is collected, Among which 64% were 1st year B.Sc. Nursing students and 36% samples were 1st year GNM students.
- **Test of Thalassemia :** The data that is collected, Among which 70% samples had undergone Thalassemia test and 30% have not.

Section:II

A structured knowledge Questionnaire was used for assessing knowledge regarding Thalassemia among students of JG College/School of Nursing, Ahmedabad, Gujarat. It is relatively a simple method for collection of data to assess the knowledge by structured questionnaire to elicit factual information. The closed ended questionnaires are efficient and easy to administer. It covers a large group within a short period of time. For above reasons structured knowledge questionnaire was consider the most appropriate tool for the collection of data for present study.

Result:

The knowledge regarding the introduction of Thalassemia shows that , out of the total score of 2, the sample had 1.6 mean and mean score 80%. The knowledge regarding the types of the Thalassemia shows that, out of the total score of 3, the sample had 2.5 mean and mean score 83.33%. The knowledge regarding causes of Thalassemia shows that, out of the total score of 2, the sample had 1 mean and mean score 50%. The knowledge regarding the sign and symptoms shows that , out of the total score of 2, the sample had 1.2 mean and mean score 60%. The knowledge regarding complication of Thalassemia shows that, out of the total score of 2, the sample had 1.8mean and mean score 90%. The knowledge regarding the management of Thalassemia shows that, out of the total score of 9, the sample had 4.9 mean and mean score 54.44%.

TABLE: 1

Frequency, percentage, distribution and characteristics of sample's age, gender, religion, investigation on Thalassemia and course of study in Nursing. (N=100)

Demographic Characteristics	No. of Surveys	Percentage (%)	Mean
AGE :			
17 year	42	36%	0.42
18 year	48	45%	0.48
19 year	08	15%	0.08
20 year	02	4%	0.02
Total:	100	100%	
GENDER:			
Male	10	10%	0.01
Female	90	90%	0.90
Other	00	00%	00
Total:	100	100%	
RELIGION:			
Hindu	90	90%	0.90
Muslim	02	2%	0.02
Christian	08	8%	0.08
Other	00	00%	00
Total:	100	100%	
CURRENT BRANCH OF STUDY:			
1st year B.Sc. Nursing 1st year GNM	61	64%	0.61
	39	36%	0.39
1st year M.Sc. Nursing	00	00%	0.00
1st year Post Basic Nursing	00	00%	0.00
Total :	100	100%	
Thalassemia test done:			
Yes No	80	70%	0.80
Don't know	20	30%	0.20
	00	00%	00
Total	100	100%	

TABLE : 2

Frequency percentage distribution of samples according to their knowledge regarding Thalassemia. **(N=100)**

KNOWLEDGE SCORE	GRADE	FREQUENCY	PERCENTAGE (%)
16-20	EXCELLENT	8	8%
11-15	GOOD	45	45%
5-10	AVERAGE	44	44%
0-4	POOR	3	3%

Table 2: Shows that majority of the samples, 45samples (45 %) have good knowledge regarding Thalassemia. 44 samples (44%) have average knowledge regarding Thalassemia, 8 samples (8%) have excellent knowledge regarding the Thalassemia, and 3 samples (3%) have poor knowledge regarding the Thalassemia.

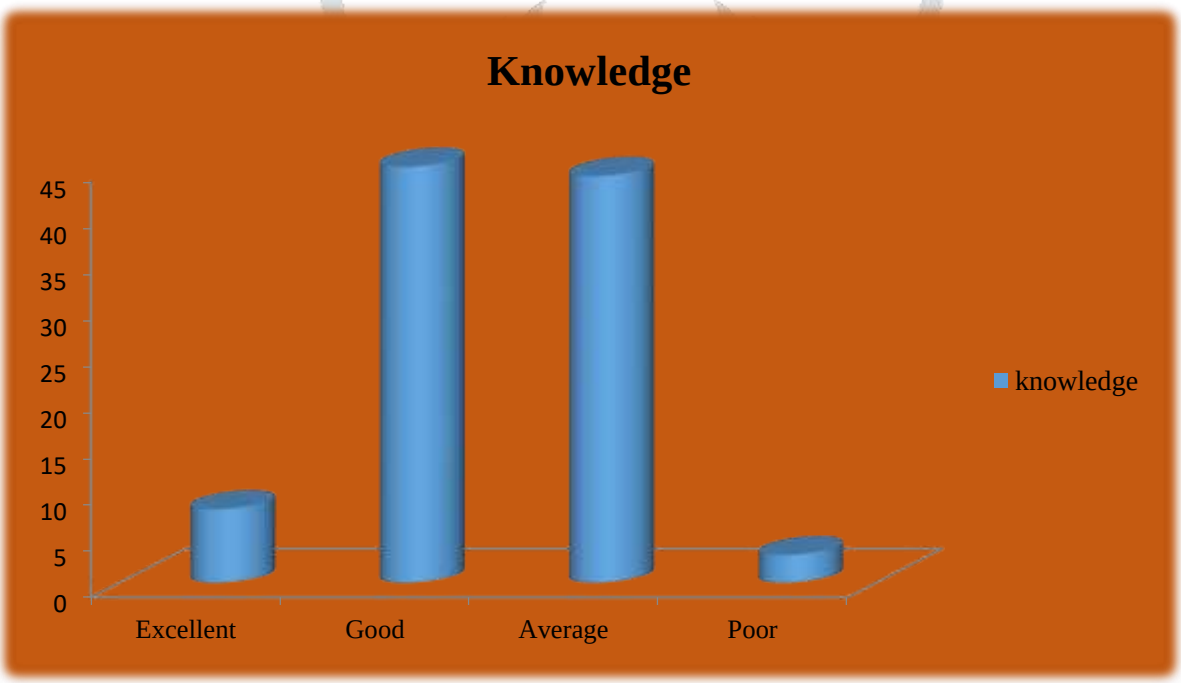
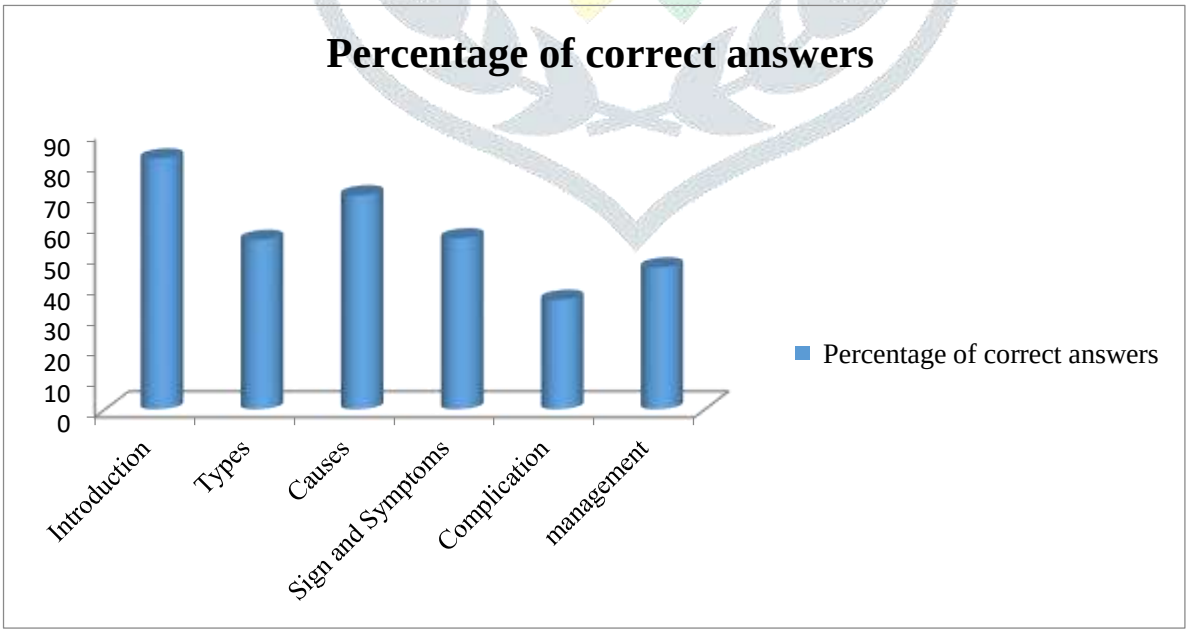


TABLE : 3

(N=100)

AREAS:	MAXIMUM SCORE	MEAN SCORE OF SAMPLES	PERCENTAGE (%)
Introduction of Thalassemia	2	1.63	81.50%
Types of Thalassemia	3	1.65	55%
Causes of Thalassemia	2	1.39	69.50%
Sign and symptoms of Thalassemia	2	1.11	55.50%
Complications of Thalassemia	2	0.71	35.50%
Management of Thalassemia	9	4.14	46%
Total	20	10.59	52.95%

Table 3 The below cylinder graph shows percentage of correct answers given by students according to various answer categories.



Result of graph shows that the 85% correct answers were of introduction question following causes and complication. However, only 35% correct answers were the least among all the answers given by samples.

Conclusion:

The thalassemia are relatively common diseases. Genetic counselling is paramount, and may even decrease the incidence of the more serious conditions. Most children tolerate the anaemia quite well and do not require any interventions. Thalassemia minor will never go away; people who think they have thalassemia minor or are at risk should have blood test so in future they can be aware for themselves in terms of not having a thalassemia major child. Also by having blood test will help the community so that, exact number of people who carry thalassemia minor can be assessed. Thalassemia major can be cured by bone marrow transplantation but, rarely will it successes.

The main study is to assess the knowledge of students who are studying in JG College/ School of Nursing and their result shows that, majority 8% samples have excellent knowledge regarding Thalassemia, 45% samples have good knowledge regarding Thalassemia, 44% samples have average knowledge regarding Thalassemia and only 3% samples have poor knowledge regarding Thalassemia.

Conflict of interest:

The authors declare that they have no competing interests.

Ethics declarations:

Ethics approval and consent to participate

JG College of Nursing, Institute Ethics Committee reviewed this study and granted ethical approval. Electronic consents have been obtained from participants.

Consent for publication: Written consent for publication was obtained from each participant.

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