Sickle cell disease is most common genetic disease and has been recognized as a major public health problem by international agencies such as WHO and United nations educational, scientific and culture organization (UNESCO). Children with sickle cell disease require more frequent hospital care and younger children are more vulnerable to morbidity.

**Aim & Objectives:**

1. To assess the knowledge of parents regarding care of children with sickle cell disease.
2. To assess the effectiveness of planned teaching programme on knowledge of parents regarding care of children with sickle cell disease.

**Material & Methodology:**

The present study was designed to be an interventional type by selecting 30 parents randomly by convenient method sampling from the pediatric ward of the Government Medical College where children with sickle cell disease were admitted during the month of February-March 2015. A structured questionnaire was used to collect the pretest and post test data on the knowledge of parents regarding care of sickle cell after a planned teaching programme and data analyzed using SPSS software version 19.

**Results:**

Out of total subjects 30% of each parents were in the age between 26-30 and >35 years. About 56.67% were females and 43.33% were males. Majority of the subject 30% each had completed their secondary and higher secondary education with Maximum subject 50% had monthly family income 4001-5000Rs. About 66.67% of subjects were Hindu. Majority of subject 40% were labourer followed by 36.67% were having private job. Maximum subjects with 66.67% belongs to joint family. Mean knowledge score in pretest was 10.73 ± 3.32 and after the planned teaching mean knowledge score was 16.9 ± 2.59, this difference was found to be statistically significant.

**Conclusion:**

In the present study the planned teaching programme significantly helps in the improvement of the knowledge score (68.02%) of parents regarding care of children with sickle cell disease.

**Keywords**

Sickle cell disease, planned teaching programme

**ABSTRACT**

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**Introduction:**

According to the World Health Organization (WHO), anemia is defined as hemoglobin (Hb) levels <12.0 g/dl in women and <13.0 g/dl in men. Anemia is present when the hemoglobin level is more than two standard deviations below the mean for the child's age and sex. Pregnant women and children are particularly vulnerable. Sickle cell anemia is an autosomal recessive disease that results from the substitution of valine for glutamic acid at position 6 of the beta-globin gene. Patients who are homozygous for the HbS gene have sickle cell disease. Patients who are heterozygous for the HbS gene have sickle trait. The gene frequency for sickle cell anemia in India is 4.3%, but the disease is more frequently transmitted to the tribal population. In India, it is the second most common haemoglobinopathy, next to Thalassemia. According to State Health Department of Maharashtra and Jharkand. Patients with sickle cell anemia presents with serious and varied manifestations. Pain is the most common presentation of vaso-occlusive crisis while acute chest syndrome, sequestration crises, aplastic crises and various infections are also form of presentation. In the management of such children hydration and analgesia are the mainstays in a pain crisis. Blood transfusion is useful in patients in aplastic crisis and acute sequestration crisis. Oxygen supplementation is of benefit if the patient has hypoxia. Intubation and mechanical ventilation may be required in children in whom cerebrovascular accidents have occurred, or with acute chest syndrome. In the preventive care all children require prophylaxis with, at least until 5 year of age and should receive immunizations with pneumococcal, meningococcal and Haemophilus influenzae B vaccines. Parents need to learn how to identify complications and be informed for necessity and indications for admission. Genetic counselling and testing should be offered to the family. In India, HbS was first detected in Veddoid tribe in Nilgiri hills of Tamilnadu, in 1952 by Lehman and Cutbush. 

**Table 1. Distribution of study subject according to socio demographic characteristics. (N=30)**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-25</td>
<td>4</td>
<td>13.33</td>
</tr>
<tr>
<td>26-30</td>
<td>9</td>
<td>30</td>
</tr>
<tr>
<td>31-35</td>
<td>8</td>
<td>26.67</td>
</tr>
<tr>
<td>&gt; 35</td>
<td>9</td>
<td>30</td>
</tr>
</tbody>
</table>

**Gender**

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>13</td>
<td>43.33</td>
</tr>
<tr>
<td>Female</td>
<td>17</td>
<td>56.67</td>
</tr>
</tbody>
</table>

**Conclusion:**

In the present study the planned teaching programme significantly helps in the improvement of the knowledge score (68.02%) of parents regarding care of children with sickle cell disease.
Discussion:
In the present study, “Effectiveness of planned teaching programme on the knowledge of parents regarding care of children with sickle cell disease at tertiary care hospital of Central India” there were total 30 parents. About 30% each belongs to the age between 26-30 and > 35 years 26.67% and 13.33% belong to age between 31-35 and 20-25 years respectively. Majority 56.67 % were females. Majority of the subject 30% each had completed their secondary and higher secondary education, 10% were illiterate and only 3.33% had completed their graduation level. Majority of subject 40% are laborer. Maximum subjects 46.66% belongs to joint family.

In the study by Purnima Yadav et al 100 parents were enrolled. Maximum 66% parents had education between 6th to 10th standard followed by 13% parents who had education up to 12th standard. Only 6 parents were uneducated and 7 were graduate.

In our study the mean knowledge score in pretest was 10.73 ± 3.32. Mean knowledge score after the planned teaching was 16.9 ± 2.59, this difference was to be statistically highly significant. Knowledge score was improve by 68.02%. p-value is 0.0001, which is > 0.05 thus it is conclude that planned teaching regarding care of children with sickle cell disease.

Purnima Yadav et al found that in view to the questions about awareness of sickle cell anaemia 65% were aware and 35% were unaware. Out of those who were aware of sickle cell only 37% knew exactly what is sickle cell anemia and 63% responded wrongly. After providing education, post test scores regarding the knowledge improved significantly.

Conclusion: In our study pre test the mean knowledge score was 10.73 which after the planned teaching was 16.9. Therefore teaching the parents about sickle cell has significantly shows the improvement of their knowledge.

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Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

References: