Awareness Of Thalassemia In Male And Female Students.

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ABSTRACT

**Objective:** Objective of this look at is to access the awareness stage of Thalassaeemia in University college students. Method: Study design was chosen to be crosssectional prospective. Sample size for this study was taken as 64. A wellstructured data collecting form or questionnaire was created, analysed and filled out during the interview. The data was summarized using descriptive statistics. Results The total 64 cases of all age groups were enrolled in this study. There are 64 cases of all age group in which there are 21 male (32.8%) and 43 females (67.2%). In this survey out of 64 persons 53 persons know about thalassemia. 5 people know about thalassemia gene. 40 persons know that thalassemia is inherited from parents. 53 persons know that thalassemia is blood related disease. 45 persons know severe anaemia is the clinical presentation of thalassemia. 25 persons know about the permanent treatment of thalassemia. 37 persons know that thalassemia is treated by bone marrow transplantation. However, the study findings revealed that education status had a substantial impact.

**Conclusion:** Females have more awareness about thalassemia then man.

**Key Word:** Thalassaemia, Haemoglobinopathy, Awareness.

INTRODUCTION

Thalassaemia is a hereditary haemoglobinopathy due to the absence or decreased synthesis of either alpha or beta globin chain. Thalassemia minor is defined by mild asymptomatic hemolytic anaemia with no clear clinical signs, whereas thalassemia major is characterised by severe anaemia symptoms that arise in the first year of life and necessitates the patient's life time blood transfusion. Thalassemia intermedia (TI) is depicted in the middle, which illustrates patients who display indications that are too mild to be classified as thalassemia major but are exceedingly serious, making it hard to be classified as thalassemia minor.

Thalassemias are among the most prevalent genetic illnesses, affecting at least 60,000 people each year around the world. Because of cultural factors and the family system, consanguineous marriages are highly widespread in our cultures. That's why every passing
day disease burden grows. People are hesitant to opt for premartial thalassemia screening because of cultural norms, despite the fact that they are aware of the nature of its inheritance having thalassemia in first cousins, and despite the fact that current legislation in Pakistan requires premartial thalassemia screening for every couple.

Repeated blood transfusions or permanent treatments, such as bone marrow transplantation, are two treatment possibilities. Blood transfusions are uncomfortable for the patient and have their own set of dangerous problems, while bone marrow transplantation is out of reach for the majority of people in developing countries.

As a result, prevention is the only method to avoid this socioeconomic burden.

The thalassemias are a group of inherited hematologic illnesses that are caused by faults in the production of one or more haemoglobin chains. Thalassemia is caused by a reduction in the synthesis of one or more of the globin chains that make up the haemoglobin (Hb) tetramers, or the complete absence of one or more of the m.

MATERIAL AND METHODOLOGY

A cross-sectional approach was used for the current study. This study method was chosen because it is low-cost and time-consuming, as a cross-sectional study is undertaken just at one precise point in time.

The study participants were all University students that were enrolled in the different universities of Pakistan and all the students were older than 18 years.

A self-administered questionnaire was developed based on the previous reports. The questionnaire was composed of two parts. The first part consist of demographic details including gender and age.

While second part consist of questions regarding awareness of thalassemia. A total 64 participants were enrolled in this study. Google form was used to create a questionnaire and a link was shared via social media platform.

RESULTS

The total 64 cases of all age groups were enrolled in this study. The mean value of age was found to be 24.13 ± 3.3550 with minimum age of 18 years and 30 years as maximum age range. The are 64 cases of all age group are involved in this study in which there are 21 male (32.8%) and 43 females (67.2%).

In this survey out of 64 persons 53 persons know about thalassemia and 11 people have no idea about thalassemia. (Table 3)

Out of 64 persons 5 people know about thalassemia gene, 34 people have no idea about thalassemia gene and 25 did not know about thalassemia gene (Table 4)

Out of 64 persons 40 persons know that thalassemia is inherited from parents 5 persons have no idea about it and 19 persons did not know about it. (Table 5)

Out of 64 persons 53 persons know that thalassemia is blood related disease 2 persons have no idea about it and 5 persons didn’t know about it (Table 6)

Out of 64 persons 45 persons know severe anemia is the clinical presentation of thalassemia major, 19 persons did not know about it (Table 7)

Out of 64 persons 24 persons know that thalassemia can be detected during pregnancy 10 persons have no idea about it and 30 persons didn’t know about it. (TABLE 8)
Out of 64 persons, 26 persons know that thalassemia carriers are symptoms free. 12 persons have no idea about it and 26 persons didn’t know about it (Table 9).

Out of 64 persons, 26 persons know about screening test for that gene, 24 persons have no idea about it and 14 persons did not know about it (Table 10).

Out of 64 persons, 49 persons know that thalassemia major children need blood transfusion. 3 persons have no idea about it and 12 persons didn’t know about it. (Table 11)

Out of 64 persons, 06 persons did not know that thalassemia is spread by food, medicine or infection. 38 persons know that and 20 persons have no idea about it (Table 12).

Out of 64 persons, 15 persons know that thalassemia is transmitted through blood. 32 persons did not know and 17 persons have no idea about it (Table 13).

Out of 64 persons, 50 persons know that thalassemia carriers have a chance of producing thalassemia major baby. 02 persons did not know about this and 12 persons have no idea about it (Table 14).

Out of 64 persons, 33 persons know that thalassemia is perverted before marriage. 03 persons did not know and 28 persons have no idea about it (Table 15).

Out of 64 persons, 24 persons know that thalassemia is a curable disease. 14 persons did not know and 21 persons have no idea about it (Table 16).

Out of 64 persons, 16 persons know about the aminocentesis test. 34 persons did not know and 14 persons have no idea about it (Table 17).

Out of 64 persons, 34 persons know that regular blood transfusions is the only treatment. 11 persons did not know and 19 persons have no idea about it (Table 18).

Out of 64 persons, 45 persons know that thalassemia is treated by giving blood to the patient. 05 persons did not know and 14 persons have no idea about it (Table 19).

Out of 64 persons, 25 persons know about the permanent treatment of thalassemia. 18 persons did not know and 21 persons have no idea about it (Table 20).

Out of 64 persons, 37 persons know that thalassemia is treated by bone marrow transplantation. 01 person did not know and 26 persons have no idea about it (Table 21).

### Table 1: Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
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<td>32.8</td>
</tr>
<tr>
<td>Female</td>
<td>43</td>
<td>67.2</td>
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### Table 2: Age

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<th>Age</th>
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<th>Percent</th>
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<td>1.6</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>4</td>
<td>6.3</td>
</tr>
<tr>
<td></td>
<td>21</td>
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<td>22</td>
<td>6</td>
<td>9.4</td>
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<tr>
<td></td>
<td>23</td>
<td>5</td>
<td>7.8</td>
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<td></td>
<td>24</td>
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<td>3.1</td>
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<tr>
<td></td>
<td>26</td>
<td>2</td>
<td>3.1</td>
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<td></td>
<td>27</td>
<td>4</td>
<td>6.3</td>
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<tr>
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<td>4.7</td>
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<tr>
<td></td>
<td>30</td>
<td>7</td>
<td>10.9</td>
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Table 3

<table>
<thead>
<tr>
<th>Have you ever heard of thalassemia?</th>
<th>Frequency</th>
<th>Percent</th>
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<tr>
<td>Yes</td>
<td>53</td>
<td>82.8</td>
</tr>
<tr>
<td>No</td>
<td>11</td>
<td>17.2</td>
</tr>
<tr>
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</tbody>
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Table 4

<table>
<thead>
<tr>
<th>Do you have thalassemia gene?</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>5</td>
<td>7.8</td>
</tr>
<tr>
<td>No</td>
<td>34</td>
<td>53.1</td>
</tr>
<tr>
<td>Dont know</td>
<td>25</td>
<td>39.1</td>
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<tr>
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Table 5

<table>
<thead>
<tr>
<th>Thalassemia is inherited from parents?</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
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<tr>
<td>Yes</td>
<td>40</td>
<td>62.5</td>
</tr>
<tr>
<td>No</td>
<td>5</td>
<td>7.8</td>
</tr>
<tr>
<td>Dont know</td>
<td>19</td>
<td>29.7</td>
</tr>
<tr>
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Table 6

<table>
<thead>
<tr>
<th>Thalassemia is the blood related disease?</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
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<td>53</td>
<td>82.8</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td>Dont know</td>
<td>9</td>
<td>14.1</td>
</tr>
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Table 7

<table>
<thead>
<tr>
<th>Severe anemia is the clinical presentation of thalassemia major?</th>
<th>Frequency</th>
<th>Percent</th>
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</table>

Table 8

<table>
<thead>
<tr>
<th>Do you know thalassemia can be detected during pregnancy?</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>24</td>
<td>37.5</td>
</tr>
<tr>
<td>No</td>
<td>10</td>
<td>15.6</td>
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<tr>
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<td>30</td>
<td>46.9</td>
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</tbody>
</table>

Table 9

<table>
<thead>
<tr>
<th>Thalassemia carriers are symptoms free?</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>26</td>
<td>40.6</td>
</tr>
<tr>
<td>No</td>
<td>12</td>
<td>18.8</td>
</tr>
<tr>
<td>Dont know</td>
<td>26</td>
<td>40.6</td>
</tr>
<tr>
<td>Total</td>
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<td>100.0</td>
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</tbody>
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Table 10

<table>
<thead>
<tr>
<th>Do you know about the screening test for thalassemia gene detection before marriage?</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>26</td>
<td>40.6</td>
</tr>
<tr>
<td>No</td>
<td>24</td>
<td>37.5</td>
</tr>
<tr>
<td>Dont know</td>
<td>14</td>
<td>21.9</td>
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<tr>
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</tr>
</tbody>
</table>
### Table 11

<table>
<thead>
<tr>
<th>Thalassemia major children need blood transfusion?</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>49</td>
<td>76.6</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>4.7</td>
</tr>
<tr>
<td>Don’t know</td>
<td>12</td>
<td>18.8</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
<td>100.0</td>
</tr>
</tbody>
</table>

### Table 12

<table>
<thead>
<tr>
<th>Can thalassemia be spread by food, medicine or infection?</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>6</td>
<td>9.4</td>
</tr>
<tr>
<td>No</td>
<td>38</td>
<td>59.4</td>
</tr>
<tr>
<td>Don’t know</td>
<td>20</td>
<td>31.3</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
<td>100.0</td>
</tr>
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</table>

### Table 13

<table>
<thead>
<tr>
<th>Can thalassemia is transmitted by blood?</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>32</td>
<td>50.0</td>
</tr>
<tr>
<td>No</td>
<td>15</td>
<td>23.4</td>
</tr>
<tr>
<td>Don’t know</td>
<td>17</td>
<td>26.6</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
<td>100.0</td>
</tr>
</tbody>
</table>

### Table 14

<table>
<thead>
<tr>
<th>A marriage between two thalassemia carriers have a chance of producing thalassemia major baby?</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>50</td>
<td>78.1</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td>Don’t know</td>
<td>12</td>
<td>18.8</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
<td>100.0</td>
</tr>
</tbody>
</table>

### Table 15

<table>
<thead>
<tr>
<th>Can thalassemia be prevented before marriage?</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>33</td>
<td>51.6</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>4.7</td>
</tr>
<tr>
<td>Don’t know</td>
<td>28</td>
<td>43.8</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
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</tr>
</tbody>
</table>

### Table 16

<table>
<thead>
<tr>
<th>Is thalassemia is the curable disease?</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>29</td>
<td>45.3</td>
</tr>
<tr>
<td>No</td>
<td>14</td>
<td>21.9</td>
</tr>
<tr>
<td>Don’t know</td>
<td>21</td>
<td>32.8</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
<td>100.0</td>
</tr>
</tbody>
</table>

### Table 17

<table>
<thead>
<tr>
<th>Do you know about aminocentesis test?</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>16</td>
<td>25.0</td>
</tr>
<tr>
<td>No</td>
<td>34</td>
<td>53.1</td>
</tr>
<tr>
<td>Don’t know</td>
<td>14</td>
<td>21.9</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
<td>100.0</td>
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</tbody>
</table>

### Table 18

<table>
<thead>
<tr>
<th>Do you think regular blood transfusion is the only treatment?</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>34</td>
<td>53.1</td>
</tr>
<tr>
<td>No</td>
<td>11</td>
<td>17.2</td>
</tr>
<tr>
<td>Don’t know</td>
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<td>29.7</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
<td>100.0</td>
</tr>
</tbody>
</table>
DISCUSSION

In Pakistan, thalassemia is the most common genetic disorder. This is most likely due to the lack of knowledge about the pre-marital and prenatal diagnosis of thalassemia. Thalassemia has the potential to run in families. The majority of the participants in this study accurately stated that thalassemia is not a contagious disease. Thalassemia is a blood illness that has not been linked to any hypersensitivity or allergic reaction. However, some people believe that the emergence of an allergic reaction can lead to hyper sensitivity.
Patients with thalassemia major require regular blood transfusions, which causes iron to build up in numerous body organs, leading to the damage of the liver, heart, endocrine gland and kidneys. A person with thalassemia cannot live a normal life since he or she is always anaemic and requires blood transfusions, making him or her bedridden.

Education is a key predictor of an individual’s knowledge; it alters one's perception of the world, as well as their attitudes and behaviours. A person with a higher education usually has more knowledge. In this study, educated people had superior knowledge responses in crucial health determinants such as health behaviours. Individuals are enhanced through education, which is a major determinant.

CONCLUSION

The basic diagnostic method for thalassemia is haemoglobin electrophoresis (Hb-electrophoresis). Thalassemia treatment comes with a slew of side effects. All patients should have their CBC, serum ferritin, LFT, RFT, and serum calcium levels checked on a regular basis to assess the complications. Patients with thalassemia require blood transfusions on a regular basis. Which results in iron overload in body.

The most often used iron chelator for treating iron excess is deferoxax. The most effective treatment is stem cell transplantation, which is out of reach for the majority of the population.

So, the greatest strategy to avoid thalassemia is to educate people about the necessity of prenatal and premarital thalassemia diagnosis.

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