Introduction
Adequate supply of safe blood can only be assured through regular donation by voluntary unpaid blood donors. In Turkey blood is donated on a voluntary basis and half of the blood collected is through friends and relatives of the patients. For a country to maintain a basic, self-sufficient supply, it is roughly estimated that 2-2.5% of the population must give blood regularly. On average, 1800000 units of blood are collected annually in Turkey. The percentage of blood donation in Turkey is very low at 1.5%, which is less than half the Europe’s where it is reported at 4.12%. It is obvious that the blood collected for donation in Turkey is inadequate to meet the increasing demands. This can be due to lack of people’s willingness to give blood and also due to misbeliefs of people about blood and blood donation.

Gender differences in blood donation was found in some population studies; men have given more often than women. In a study from Turkey, it was stated that most donor candidates were men. Women accounted for only 11% of the people donating blood at some blood banks.

Understanding the factors that motivate women donors is essential in Turkey.

Although there are numerous studies trying to identify the factors which motivate people for donating blood, to our knowledge, this is the first qualitative study which focuses on Turkish women’s knowledge, attitudes and beliefs towards blood donation. The study is likely to help healthcare workers to plan strategies to increase blood donation rates in Turkey.

Subjects and Methods
The qualitative research was conducted between January to May 2013 in two densely-populated districts in Istanbul, Turkey. These districts are inhabited mostly by socio-economically disadvantaged people who are migrants from different parts of the country. This area also serves as the Research and Training Area of the Marmara University.

A total of seven focus group discussions with 57 women were held using a semi-structured questionnaire. During the sessions one of the researchers acted as a moderator and the other as an observer. Both were previously trained women. The researchers introduced themselves as healthcare providers which was true, but which could well introduce bias since the participating women might have thought that the researchers would know better about blood donation. In order to overcome this problem to some extent, at the beginning of the study the researchers told the...
participants that they had come to learn from them. The participants were also told that the aim of this study was to learn about their beliefs about blood donation to understand public perspectives. The sessions were recorded on a tape recorder after verbal consent was obtained from the participants. Through the sessions, the moderator kept neutral and tried to let every woman speak. Informal women leaders helped the researchers in bringing together the study participants. The sessions were held at the houses of the participants. Although the women seemed very willing to participate in the study, but wanted their names to be kept anonymous. For this reason, the researchers allowed them to use any pseudonym of choice. The sessions lasted 45-60 minutes each.

After each focus group, the interviewers took notes on what they observed and then the tapes were transcribed verbatim within 48 hours of the interviews. Each focus group transcript was read carefully for the purpose of creating a coding structure that would provide a meaningful framework to capture respondents' attitudes, beliefs and experiences. Three investigators read, identified and assigned codes of major themes of the data. These were then compared and a single code list was formed. These codes were assigned to lines of text and then a word processing programme was used by recalling relevant codes from the text.

Results
The age range of the 57 subjects was 18-65 years. The majority of the women were elementary school graduates 39(68.4%). All were married, housewives and belonged to relatively lower-middle socio-economic class. The mean number of children the women had was 3.0±2.1 with a maximum of 6 (Table-1).

The quotes used were chosen according to the themes that defined the situation more dramatically or clearly in the text. In the parenthesis following the quotes, first the age has been mentioned followed by the number of children of the participant, and finally, in some cases, the duration of their stay in Istanbul. *Sign was used to express Turkish words.

Most of the participants had positive attitudes towards blood donation and thought that blood in their body was rejuvenated once it was drawn from the body.

"It is a good thing for health ... once you give blood then your blood is fresh" (50; 5; 33 years).

"Your body is better off when you give blood because by this way your blood is circulating." (57; 33 years).

Table-1: The socio-demographic features of the participants.

<table>
<thead>
<tr>
<th>Age groups (n=57)</th>
<th>Number (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-28</td>
<td>22</td>
<td>38.6</td>
</tr>
<tr>
<td>29-39</td>
<td>17</td>
<td>29.8</td>
</tr>
<tr>
<td>40-50 years</td>
<td>11</td>
<td>19.3</td>
</tr>
<tr>
<td>51-60 years</td>
<td>4</td>
<td>7.01</td>
</tr>
<tr>
<td>61 years and above</td>
<td>3</td>
<td>5.3</td>
</tr>
<tr>
<td>Level of education</td>
<td>Number (n)</td>
<td>Percentage (%)</td>
</tr>
<tr>
<td>Illiterate</td>
<td>13</td>
<td>22.8</td>
</tr>
<tr>
<td>Primary school</td>
<td>39</td>
<td>68.4</td>
</tr>
<tr>
<td>Middle or high school</td>
<td>5</td>
<td>8.8</td>
</tr>
<tr>
<td>University</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Number of children</td>
<td>Number (n)</td>
<td>Percentage (%)</td>
</tr>
<tr>
<td>0</td>
<td>6</td>
<td>10.5</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>10.5</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>21.05</td>
</tr>
<tr>
<td>3</td>
<td>16</td>
<td>28.07</td>
</tr>
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<td>4</td>
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<td>3</td>
<td>5.2</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>5.2</td>
</tr>
</tbody>
</table>

Table-2: Barriers to blood donation.

Concern of becoming anaemic: Concern of having low blood associated with ill health. Therefore blood donation was not favoured by the women since they were already losing blood through menstruation.

The circumstances surrounding of women: Being too busy and overloaded with caring of the family (no time for going to a blood bank).

Belief of impurity of female blood: The idea comes from dirtiness of menstrual blood.

Suspicion of having unhealthy blood: Women believed that their blood may harm the recipient and emphasised that they will give their blood if a doctor approved that it was healthy.

Rumours, misbeliefs and negative experiences

Distrust of blood banks

Anxiety about the procedure fear of needle, fear of syncope.

Vulnerability: Feeling not strong enough for giving blood as men.

Most of our respondents had some idea of who can donate blood and who cannot, though none of them had ever donated blood before.

"I had hepatitis, so I cannot donate blood... If your blood work-up is clean then you can give blood." (50; 5; 33 years).

"If your blood is low, you cannot give blood. If you have cancer, diabetes, hepatitis and some other diseases, you
cannot give blood." (28; 2; 17 years).

The majority of the respondents believed that the donors should be free of any kind of diseases and these diseases can be transmitted by the blood.

"If you have ... diseases, like cancer, tuberculosis, heart diseases, you cannot give blood. This blood is of no use to others." (34; 4).

In our sample, donor’s blood colour was a substantial criterion for blood donation. Light colour of the blood was assumed as a good health sign, whereas dark colour was taken as ill health, since it might cause obstruction in the vessels "*damartikanmasi". Darkness of blood was evaluated as signs of heart diseases or asthma. Obese people were also believed to be at risk of obstruction of vessels because they were thought to have dark blood. Dark blood was also defined as thick blood, as a parameter which indicates liquidity of the blood. Either thickness or darkness was explained as reasons of clotting because of the slow motion of blood inside the vessels.

Therefore, some of the participants thought that excess of blood which was thick and dark in the body caused hypertension. If the excess blood was discharged from the body, the tension decreases, therefore, regular donation was found a good way to do it.

"My brother had such an excess of blood that when the nurse punctured the body with a needle his blood flushed. That's why he used to give blood regularly, otherwise his tension rises." (32; 2; 15 years).

Respondents expressed that one of the incentives to serve as a donor was the desire to help others and they believed that blood donation is an important contribution to other lives.

"For protecting the health of the other, I would give blood." (28; 2; 17 years).

"We had a relative who had blood cancer (leukaemia). He needed blood, but it was very hard to find. After he passed away, my husband gives blood regularly." (47; 2; 22 years).

Some of the participants also stated that it is recommended in the religion. The religious people imam or hodja was an important character to advise them to donate blood because it is rewarding according to religion (*sevap).

One of the participants stated:

"It is good to give blood in the eyes of God. If every man gives blood once a year it is enough to refresh his body." (62; 35 years).

"In ancient times of Islam, people used to get rid of excess of blood by "*hacamat" (cutting the body’s parts with sharps, usually back of the body or thumbs) but now a hodja told us to give blood instead of this, because you also help somebody else, and this would be "*sevap." (46; 27 years).

In our sample, another motivating factor to blood donation was the person receiving it. Women were eager to donate blood if a very close relative (first degree) needed it.

"I have not given blood before, but if it is needed for one of my beloved ones, I will sure think of it." (57; 33 years).

There was a concern about becoming anaemic in our sample, and having low blood was generally accepted as ill health. Therefore blood donation was not favoured by the women since they were already losing blood through menstruation. However, they thought that it was men’s duty to donate blood.

"Having low blood will lower my blood pressure, will cause sleeping disorders, fatigue, feeling cold, and headache..."(34; 2; 17 years).

"God created us in this way, we have menstruation and men will give their blood to refresh their blood." (35; 4)

The circumstances surrounding women such as being too busy and overloaded with caring for the family might be a barrier for blood donation. One of them said that once she was going to give blood to one of her close relatives, but because there was no one to leave her children with, she was not able to go to the blood bank.

Based on their explanations, belief about the impurity of female blood seemed to be a factor for avoiding blood donation. Women believed that their blood may harm the person and emphasised that they will give their blood if a doctor approved that it was healthy. The idea comes from dirtiness of menstrual blood.

"All dirtiness was discharged with menstruation blood." (30; 2; 24 years)

"Women can give (blood) but it should be checked before, and if it is clean, you can give your blood." (25; 1; born in Istanbul)

"Various diseases can be transmitted by blood. According to my opinion, it is best not to give and not to take (blood)." (36; 3; 29 years)

Rumours, misbeliefs and negative experiences most probably had an influence on blood donation behaviour. Some of the participants believed that character or
chronic non-communicable diseases may get transferred to the recipient.

"I know a woman suffered from rheumatism and after she had given blood to her son-in-law he also got the disease." (44; 5; 27 years)

Some of the participants emphasised that the personality and sex characteristics of the person can transmit through blood transfusion.

"I felt like men after I received the blood of a man, my sweat smelt like men and I did not want to have sex with my husband." (45; 4; 30 years)

Some of the women in our sample stated the risk of becoming infected with communicable diseases such as human immunodeficiency virus (HIV), acquired immunodeficiency syndrome (AIDS) or hepatitis when receiving blood.

"Laboratory test of blood is needed before receiving someone else's blood to see if it has Hepatitis B and AIDS" (28; 2; 7 years).

"Untested blood should not be received since it could be carrying the microbes of other people." (43; 2; 10 years).

In our sample some of the participants seemed concerned about the distrust related to blood banks. One of the participants stated:

"In Turkey you cannot depend on the blood you are receiving, you can catch disease, or it can be putrid blood." (57; 33 years).

Anxiety about the procedure became a barrier in some instances. Two subjects mentioned that there were women who got syncope during blood donation. Women usually regarded themselves much more vulnerable and not strong enough for giving blood as much as men (Table-2).

Discussion

The findings of the current study reveal some interesting facts regarding women's behaviour and perception towards blood donation and blood transfusion. If used effectively, such results can eventually help in efforts to attract and retain more donors.

In our study women emphasised that one of the motivations to serve as a donor was the desire to help others. A hidden moral subtext of altruism in expression of our participants could be sensed for reasons of blood donation. Titmuss, in his seminal study of blood donation, showed that there were few acts of donation based on "pure altruism". He explained that blood donation was a form of "creative altruism", which was a way to fulfil one's sense of obligation and to feel part of society by gifting one's blood to the larger body politic. More recent anthropological works reveal further complex linkages between donation, altruism, citizenship and national identity. In an Iranian study, the main motivation to donate blood was classified as internal (altruistic and religious beliefs) and external motives. It was shown that internal motivations were significantly higher in women. Moreover, they also stated that it was recommended in the religion. The religious people, imam or hodja, were important characters to advise them to donate blood because it was rewarding according to religion (*sevap).* In the light of these findings, it is important to collaborate with religious people who have a great influence on these peoples' life.

In Turkey women tend to donate less often than men. In our sample, none of the women had donated blood before, because they thought that they were prone to getting anaemia as they were already losing blood through menstruation. Several studies indicated that by personalised monitoring and support, the number of women donors may be increased by giving them iron supplements.

In Turkey, blood donations are routinely tested for TTIs and this information needs dissemination regarding blood donation, particularly on media.

In different cultures many diseases are attributed to changes in the amount of the blood. For example, in Anderson's study, blood was seen as a non-regenerative liquid. People thought that when it is lost, it cannot be replaced, leaving the donor permanently weakened which interferes with blood donation in that community. There were many lay beliefs about blood donation in our study sample, too. However, in our study, there was a positive attitude towards blood donation and the participants thought that blood in their body was rejuvenated once it was drawn from the body.

The result of a Pakistani study is very similar to some of
our findings. The study revealed that the primary reason women are not expected to donate blood is that their blood is considered 'napak' (impure). They believed if a woman donates blood during her 'napak' time of the month, the impure blood can harm the recipient, especially a man. Women's blood should also not be transfused into men lest they develop feminine characteristics. Women may donate blood, but only in the case of a 'majboori' (necessity) when there is no male donor available and the relationship with the recipient is extremely close. There is no belief that women should donate blood just like men.

Fear of the collection process, such as needles, blood, mistakes, feeling unwell, and the results have been reported in literature and these concerns were found to be more prevalent among women.\(^4,17,18\) In our study, the fear of giving blood was not very strongly emphasised, but only anxiety of syncope and mistakes about the procedure were mentioned.

To be aware of the lay beliefs related to blood and blood donation is extremely important in donation practices, to be able to encourage the community for their help in donation and to be able to maintain close personal contact through communication during donation.

**Conclusion**

Understanding the factors that motivate donors and presenting the issues like rumours, misbeliefs and negative experiences, which will hinder people from donating blood, will facilitate improvements in blood banks and eventually help increase the donation rates.

**References**
