



THE AWARENESS OF SAUDI PEOPLE FOR BLOOD DONATION: CURRENT SITUATION AND FUTURE DIRECTIONS

Hessah Alsulami

MD, MSc, PhD, & MBBTs

Head of Laboratory and blood bank at Imam Abdulrahman Alfiasal Hospita, Riyadh, Saudi Arabia

Abstract: In Saudi Arabia, blood donation system depends mainly on non-voluntary donors or what is called, replacement policy where the patient's family or friends donate blood to replace their patient requirement. Such a policy puts effort on patient's family to find blood donors. Moreover, the safety of the blood is jeopardized, because such donors might hide some information in order to donate. On the other hand, implementing voluntary blood donors system would lead to markedly decrease in the blood supply because of many reasons such as the infrastructure for the blood transfusion service which is a hospital based blood banking system and the awareness of Saudi people for blood donation. The aim of this study is to assess the level of awareness for blood donation among Saudis.

Method: A questionnaire based cross-sectional study was carried out in Riyadh, the capital city of Saudi, in the period from February to June 2014. The questionnaire was prepared after a review of published reports that assesses the awareness toward blood donation in different countries and was distributed equally in the four main districts of Riyadh (north, south, east, and west) attracting Saudi people in shopping malls, mosques, and other public places. **Result:** Of 475 participants 67% didn't know the benefits of blood donation, 59% didn't know the location of the blood donation center in their area, 49.7% underestimated the length of blood donation process, 64.6%, didn't have any idea about the need for blood in their area or the city, 91.2% didn't know the date for World blood donor day, and 74% believed that the blood should be free for patients who need it and patients shouldn't be asked to replace the blood they got. **Conclusion:** The study shows that Saudi population are not enough aware about the blood donation system as well as the need for blood in the country. This might be the cause for decreased number of voluntary blood donors. This study also highlights the need for using public media to increase the level of awareness which we miss in Saudi.

Key words: Awareness, Blood donation

Availability of safe blood and blood products is a critical component in improving health care. To have a safe blood there should be a nationally coordinated blood transfusion

service, collection of blood only from voluntary donors, testing of blood for transfusion transmissible infection and transfusion of the right blood to the right patient through the

appropriate clinical use of blood [Wake & Cutting, 1998]. The collection of blood only from voluntary blood donors from low-risk populations is an important measure to ensure the safety, quality, and availability of blood transfusion [Wake & Cutting, 1998].

In Saudi Arabia the blood donor system depends mainly on involuntary donors or what is called replacement policy where the patient's family and friends have to donate blood to replace the amount of blood that patient was given. Such a policy put an effort on patient's family to find blood donors. Moreover, the safety of the blood is jeopardized, because such donors might hide some information in order for them to donate. On other hand, implementing voluntary blood donors system would lead to markedly decrease in the blood supply because of so many reasons such as the infrastructure for the blood transfusion service which is a hospital based blood banking system and the awareness of Saudi people for blood donation.

This problem makes urgent the exploration of the factors affecting the awareness of Saudi people for blood donation in order to identify affecting strategies for increasing the donor base and fulfilling future blood needs.

One broad objective guides this study, which is to assess the level of awareness for blood donation among Saudi people. We chose city of Riyadh because of it acts as representative for Saudi Arabia demography.

Materials and Methods: A questionnaire based cross-sectional study was carried out in Riyadh, the capital city of Saudi, in the period from February to April 2014. The questionnaire was prepared after a review of published reports that assess the awareness toward blood donation in different countries [McMahon & Byrne, 2008] [Gilani *et al*, 2007] [Agrawal *et al*, 2013].

The questionnaire was distributed equally in the

four main districts of Riyadh (north, south, east, and west) attracting Saudi people in shopping malls, mosques, and other public places. 99.00% of the participants were male who were requested to give an answer to most question by a 'Yes' or 'NO'. The total number of respondents was 475, age between 17 and 60 years, and 53% of them were highly educated (bachelor degree or higher). The response rate to the questionnaire was 100%.

Statistical analysis

The information obtained was entered into a computer data sheet (Microsoft Excel) and the responses to the questions were expressed, where applicable, as percent yes or no

Results

a. **The benefits of blood donation:** When the participants in the study were asked whether they know the benefits for blood donation or not, around 67% (316) answered No. of those 75% age between 30 and 40 years, 86% were highly educated, and 56% had a history of blood donation. Moreover, 48% of them would not respond to the call for blood donation.

b. **The location of the nearby blood donation center:** 59% of the participants did not know the location of the blood donation center in their area. In spite of 33% had a history of blood donation, according to them that donation was a replacement for family members. When they were asked whether to respond to the call for blood donation or not 36% answered no.

c. **Length of blood donation process:** The average length for blood donation process from the moment a donor enters a blood donation center is around 30 to 40 minutes [www.mdanderson.org]. In this study 49% of the participants underestimated the length of the blood donation process (10-15 min), of them 69% wouldn't respond to the call for blood donation. 10% of the participants overestimated the length to more than 60 minutes, of them 73% wouldn't respond to the call for blood donation. Only 21% knew the average length for blood donation process, 35% of them wouldn't respond to the call for blood donation. Also, the study showed that 20% of the participants did

For Correspondence:

dr_alsulami@live.com

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not have any idea about the length of the blood donation process; none of them would respond to the call for blood donation.

d. **The need for blood in the city:** 64.6% of the participants did not have any idea about the needs for blood in their area or city, 39.4% of them were highly educated, and 51.1% would not respond to a blood donation call.

e. **The date for world blood donor day:** 91.2% of the responders did not know the date for blood donation day, 63% of them would not respond to a blood donation call.

f. **The extent of some misunderstandings about blood donation:** The participants were asked to give their opinion regarding some of the misunderstandings about blood donation such as donating blood is not good for health or blood donation might leads to anemia. Only 6.53% thought blood donation is not good for health and 5% thought that blood donation might leads to anemia.

74% of the participants regardless their education level believe that the blood should be free for patients who need it and patients should not be asked to replace the amount of blood they were given.

Discussion: Attracting eligible individual to donate blood for the first time and, equally importantly, to make a long term commitment to donate regularly requires the fertile soil of positive community attitudes to voluntary blood donation. The first requirement is public awareness of the need for the blood and blood products as an essential component of health care and understanding that they cannot be obtained by any means except the donation of human blood. This must be accompanied by recognition of the special role that voluntary blood donors play in saving lives and improving health and the need for regular voluntary donation to maintain a safe blood supply for the nation.

Public support must be fostered by confidence that the blood donation process is safe and that the blood transfusion service will respect and protect the health of blood donors. This means evaluation the image and profile of the service and developing communication strategies that

are meaningful to different target donor population. In cultures which have little tradition of blood donation, there may be many misconceptions ranging from fear of needles or fainting to beliefs that blood donation results in a loss of strength or that HIV can be contracted by donating blood [Masser *et al.* 2008].

In this study we tried to assess the awareness of Saudi regarding blood donation via asking them about the health benefits for donating blood, the need for the blood in the city of Riyadh, the location of the nearby blood donation center, the length of the blood donation process, and the date for the World blood donor day as well as assessing the extent of some misunderstanding regarding blood donation. The majority of participants in this study do not have any idea about the health benefits for blood donation, the need for the blood in the city of Riyadh, the location of the nearby blood donation center, the length of the blood donation process, or the date for the World blood donor day in spite the fact that most of them are highly educated. Considering the population in this study as a representative for the city of Riyadh, this findings show how low is the awareness of Saudi people regarding blood donation regardless there education level. Which to some extent explains the low response for the blood donation call, and the low number of voluntary blood donors (31%) shown by this study.

Moreover, only minority of the participants (5%) has some misconceptions ranging from fear of needles to belief that blood donation leads to anemia. This finding together with low number of voluntary blood donors only means lack of awareness and emphasis the need to develop communication strategies for donor education and community involvement by both blood transfusion service and ministry of health. The lack of awareness can also be seen when 74% of the participants regardless their education level believe that the blood should be free for patients who need it and patients should not be asked to replace the amount of blood they were given, because they are not aware that the only sources of blood are them and paying for blood or getting blood from abroad is risky.

In addition, the findings of this study contradict some findings of Abdel Gader *et al* who find that 71% of blood donation in Saudi is voluntary, while this study shows only 31% is voluntary. The reason for this contradiction might be the study population, for Abdel Gader's study the population mainly medical and university students [Abdel Gader *et al*, 2011].

In addition to lack of awareness, lack of well-built places and well trained staff for blood donation in Saudi also contribute to decrease number of voluntary blood donors. This can be seen when 55% of the participant has a history of blood donation (result not shown), most of them would not response to the call for blood donation and the only written reasons were long waiting time, lack of or bad waiting area, lack of respect from the staff.

In conclusion, foster a culture of voluntary blood donation in Saudi Arabia requires building strategies for donor education to increase the awareness for blood donation, and building modern centers with well trained staff to attract people for donation.

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