

**Ladies first but not as Blood Donors at University Medical College Blood Center of North India**<sup>1</sup>Dr. Kusum Thakur, Senior consultant & Asso. Professor, Department of Transfusion Medicine<sup>2</sup>Dr. Kajal Khajuria, Senior Resident, Department of Transfusion Medicine<sup>3</sup>Dr. Sukhpreet, Junior Resident, Department of Transfusion Medicine**Corresponding Author:** Dr. Kusum Thakur, Senior consultant & Asso. Professor, Transfusion Medicine, MMU, MMIMSR, Mullana, Haryana, India.**Type of Publication:** Original Research Article**Conflicts of Interest:** Nil**Abstract**

There is a paucity of gender studies in the transfusion medicine. This is true regarding effect of gender on motivating potential donors, the selection of donors and promotion of repeat donations. Blood can be taken from healthy donors in the age range of 18-65 years, weight more than 45kg and hemoglobin equal or more than 12.5gms%, for providing safe blood/component to the needy patients. Women can donate every 16weeks whereas men can donate every 12 weeks. Females cannot donate blood while in periods, pregnancy, lactation, on IVF treatment and if previously transfused. So ideally from men and women should contribute equally. Recently, WHO data about the gender profile of blood donors shows that globally 32% of women are blood donors but with wide range and in 14 of the 119 reporting countries, less than 10% of women are blood donors. Another study in India shows that only 3.1% women are blood donors. Women are more eager to donate blood than men despite their limitation as they have 21% deferral rate as compared to men (6%), because of anemia. This study was taken to know the percentage of females as blood donors at our center and to compare our results with similar studies in India and abroad. A Retro prospective study done on donors visiting a University Medical College Blood Center of North India from January 2018 to December 2019. Total

blood donors during study period were 18122, out of which 18038 (99.54%) were males and 84 (0.46%) were females. Data was analyzed statistically and found to be significant (p value. <.0001). To conclude, women in transfusion medicine are less energetic than men, so efforts should be made to make them eligible for blood donation by minimizing anemia prevalent in women.

**Keywords:** Women, Blood Donors, Transfusion.**Introduction**

Gender medicine, which comprises of diversity in biological sex impact on health and disease, many branches have tried to apply this concept to strictly biomedical fields (biology, genetics, internal medicine, cardiology, pharmacology, endocrinology, nephrology, orthopedics, epidemiology, gynecology, psychiatry and psychotherapy). There are very few gender studies in the field of transfusion medicine which involves effect of gender on motivating a potential donor, the selection of donor and promotion of repeat donations. A gender difference in blood donation does not seem to have received much attention in the literature. It seems that there has been an unexpressed acceptance of the gap between the proportions of male and female blood donors whereas this discrepancy certainly deserves a more detailed analysis, on the one hand to obtain a precise picture of the phenomenon and, on the other hand and

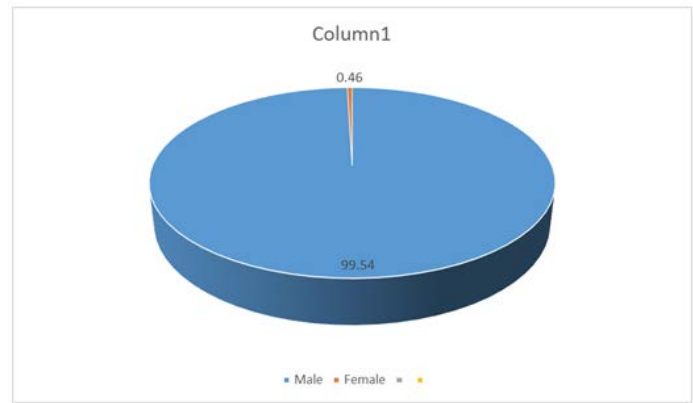
more importantly, to develop strategies and introduce the necessary interventions to close, or at least, reduce the gap (1). Recent WHO data shows that globally 32% women are blood donors, although this ranges widely and 14 of the 119 reporting countries report lower than 10% of female donors(2). India has lowest number of female blood donors in the world as females have 21% deferral rate. A study in India shows that only 3.1% women are blood donors (3). Women are more eager to donate blood than men despite their limitations which affect their donation rate. Women can donate every 16weeks whereas men can donate every 12 weeks. Females cannot donate blood while in periods, pregnancy, lactation, on IVF treatment and if previously transfused. This study was taken to know the percentage of females as blood donors at our center and to compare our results with similar studies in India and abroad and recommend measure to improve it.

**Material & Methods**

It is retro prospective study done in University Medical College blood center of north India from jan.2018 to Dec 2019. Total blood donors during study period were 18122. Out of which 18038 (99.54%) were males and 84 (0.46%) were females. Data was analyzed statistically and found to be significant (p value.<.0001).

**Results**

Total blood donors during study period were 18122. Out of which 18038(99.54%) were males and 84(0.46%) were females as shown in pie chart given below.



**Discussion**

In this study proportion of males versus female blood donors was found to be 18038 (99.54%) and 84 (0.46%) respectively which is statistically significant. Our results were much lower than studies done in various countries (Table I). World scenario of women as a blood donors shows that various regions of Italy represent about 38% as women donors but at national level it was 32%. The data are the same in Veneto and very similar in Tuscany (33%, 67%) [4,5] whereas 30.2% of the donors in Trentino are women [6].

**Table 1: World Scenario Female Blood Donors**

Studies	Male Donors	Female Donors
WHO	90%	10%
Greece	67%	33%
Italy	68%	32%
Spain	54%	46%
Portugal	57%	43%
Belgium	55%	45%
UK	47%	53%
Finland	45%	55%
Denmark	50%	50%
France	50%	50%
Netherland	50%	50%
Nigeria	99.4%	0.64%
This study	99.54%	0.46%

**Table 2: Indian Scenario Female Blood Donors (Studies\* and Data from SACS\*\*)**

	Male Donors	Female Donors
Gwalior*	96.16%	3.84%
Kashmir*	95.56%	4.44%
Ahmadabad*	95.48%	4.52%
Hyderabad*	97.73%	2.27%
Punjab**	95.50%	4.50%
Haryana**	96.50%	3.50%
Himachal **	81.00	9.00%
Jammu **	97.66%	2.34%
Delhi **	90.00%	10.00%
Gujarat**	96.42%	3.58%
Maharashtra**	94.42%	5.58%
West Bengal**	94.42%	10.00%
Our study	99.54%	0.46%

European countries seem to show a different picture, with women playing a more substantial role: in Spain 46% of the donors are women [7], in Portugal 43% [8], in Belgium 45.4% [9] in the Netherlands 50% [10] in Denmark 50% [11] in France 50% [12], in the United Kingdom 53% [13] and in Finland 55% [14] as shown in Table I. Greece is the only European country in which the percentage of female donors is 33%, which is similar to that in Italy; it does not, however, seem that the difference is related to territory, since the percentages of female donors in other Mediterranean countries, such as Spain and Portugal, and differ considerably from that in Italy.

In Nigerian study, results are almost similar to our study (15). A previous report that investigated donor rates in Germany and Switzerland between 1994 and 2010 suggested the need to intensify efforts to motivate women to give blood where cultural and religious issues such as women's dependence on men, the erroneous belief that

men are healthier than women, that women make monthly blood donations to nature through their menstrual cycle and other factors such as pregnancy and breastfeeding further restrict many women from donating blood. The total number of blood donors from January 2010 to July 2013 was 14,965. Donors included 14,871 males (99.4%) and 94 females (0.64%). The number of male donors was significantly higher than that of female donors ( $P < 0.0001$ ). It was almost similar finding as in our study. (16)

Our result was not comparable to studies done in India like study done by Sharma et al in Gwalior showed 3.84% female donor which is much higher than our study in which only 0.46% females as donors. Other studies in India done in Hyderabad, Kashmir, Ahmadabad (4, 17,18) showed 2.27%, 4.44% and 4.52% as female donors' respectively which is again higher than our study. Data collected from State AIDS control societies of North India showed female donors as 2% to 10% which is again higher than our study (Table II).

Thus in this study ratio of females to males is 99.54% to 0.46% which is statistically significant with  $p < 0.0001$ , which may be attributed to rural location of university medical college where there may be lack of awareness among society as well as females regarding blood donation.

**Conclusion**

Women are less energetic than men as far as transfusion medicine is concerned. Efforts should be made to make them eligible for blood donation by minimizing anemia prevalent in women. Gender bias in society has to be improved to make women equal to men as far as diet is concerned. Women should be made independent by education facilities, jobs reserved so that they are equally participating in blood donation drives as well as donate

blood/component. Strategies should be made to make rural women more aware of blood donation.

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### References

1. Marco Bani, Barbara Giussani Gender differences in giving blood: a review of the literature *Blood Transfus.* 2010Oct; 8(4)278–287.
2. WHO Data source: This fact sheet is based on the data obtained through the WHO Global Database on Blood Safety (GDBS) for the year 2015 which were reported by 139 countries. To give a more complete overview of the global situation, data for the year 2014 have been used from 17 countries and data for the year 2013 have been used from 17 countries, where current data are not available. Overall, responses received from 173 countries cover 98.03% of the world's population.
3. Sharma R. Psychosocial profiling of blood donors and assessing source of awareness of blood donation through a blood donation camp at a medical college, Ahmadabad, Gujarat. *Asian Journal of Transfusion Science* 2011;5:183-4.
4. Bilancio sociale 2008 Avis Veneto; available at <http://www.avisveneto.it/ZoomInfo.asp?IDMSG=4830&Liv=1&IDL=26> (last consulted, February 2010).
5. Bilancio sociale 2007 Avis Toscana; available at [http://www.avis.it/toscana/usr\\_view.php?ID\\_SEZI ONE=35&ID=929](http://www.avis.it/toscana/usr_view.php?ID_SEZI ONE=35&ID=929) (last consulted, February 2010).
6. Osservatorio associativo 2007 Avis Trentino; available at <http://digilander.libero.it/fadange/Avistrento/index.html> in the section "relazioni e verbali" (last consulted, February 2010).
7. Federación Española de Donantes de Sangre, available at [http://www.telefonica.net/web2/donasangre/papel\\_fedonadose4.htm](http://www.telefonica.net/web2/donasangre/papel_fedonadose4.htm) (last consulted, February 2010).
8. Annual Report 2008, Instituto Portugues do sangue, available at: [www.ipsangue.org](http://www.ipsangue.org).
9. Annual Report Belgian Red Cross, 2008, available at: [www.rodekruis.be](http://www.rodekruis.be).
10. 2008. Foundation Sanquin, personal communication from Dr. Labadie,
11. The Danish Blood Donor Association, Denmark, available at: [www.bloddonor.dk](http://www.bloddonor.dk).
12. Rapport d'activité 2007, ESF (Établissement Français du Sang), available at: [www.donnedusang.net](http://www.donnedusang.net).
13. NHS Blood and Transplant, 2007 United Kingdom, available at <http://www.blood.co.uk>.
14. Annual Report 2008 Finland Red Cross, available at [www.bloodservice.fi](http://www.bloodservice.fi)
15. Erhabor O, Isaac Z, Abdulrahman Y, Ndakotsu M, Ikhuenbor DB, et al. (2013) Female Gender Participation in the Blood Donation Process in Resource Poor Settings: Case study of Sokoto in North Western Nigeria. *J Blood Disorders Transf* 5: 176. doi: 10.4172/2155-9864.1000176 Page 2 of 5 Volume 5 • Issue 1 • 1000176 *J Blood Disorders Transf*.
16. Tscheulin DK, Lindenmeier J (2005) The willingness to donate blood: an empirical analysis of socio-demographic and motivation-related determinants. *Health Serv Manage Res* 18: 165-174.
17. Samreen Siraj Bala et al: *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)* e-ISSN: 2279-0853, p-ISSN: 2279-0861. Volume 14, Issue 2 Ver. I (Feb. 2015), PP 116-119.

18. Patel Piyush A, Patel Sangeeta P, Shah Jigesh V, Oza Haren V-Frequency and distribution of blood groups in blood donors in western Ahmedabad – a hospital based study, national journal of medical research,2012,202.

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