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ANALYSIS OF BASIC PROFILE OF BLOOD DONORS IN BLOOD BANK AT NORTH KASHMIR

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Abstract

Background: For the blood donation to be healthy and safe it is very important for the donor to be in good health. There is limited data regarding the profile of bloods donors in Kashmir. Our study was done to assess the demographic and health status of blood donors in north Kashmir

Methods: A cross sectional study assessing the secondary data was done in blood bank associated with Government Medical college district Baramulla in North Kashmir.

Results: A total of 364 donors were analysed. Majority were male voluntary donors. Maximum (31 .5 %) donors were O-positive followed by B-positive and A-positive blood groups. The mean age of the participants was 30.82 ±8.14 years. . The mean weight of the study population was 69.24 ±8.9274 kg .The mean Hb of the donors was 13.3 ±0.66 gm/dl.

Conclusion: Voluntary donors which are considered to be the safest type of donors were the majority in our study. More than 90 % of the study population had haemoglobin values above 12gm/dl**.**

INTRODUCTION:

Globally about 112.5 million blood donations are collected and more than half of these are collected only in High income countries.[1 - 3]Around 13000 blood centres in 176 countries report collecting a total of 110 million donations as per World Health Organisation. Further reports by WHO suggested that collections at blood centres vary according to income groups of countries. The median annual donations per blood centre is 5400 in the low and middle income countries, as compared to 16 000 in the high income countries. [1-3] Data about the gender profile of blood donors shows that globally 30% of blood donations are given by women, although in some countries less than 10% of donations are given by female donors.[4- 6] The age profile of blood donors shows that, proportionally, more young people donate blood in low and middle income countries than in high-income countries. The Demographic information of blood donors is important for formulating and monitoring health care strategies. There are 3 types of blood donors voluntary, unpaid family/replacement and paid donors. A reliable supply of safe blood can be assured by a stable base of regular, voluntary, unpaid blood donors.

These donors are considered to be the safest group of donors as the prevalence of blood borne infections is lowest among this group. In India National AIDS Control Organization's (NACO) statistics show that the annual rate of blood donation is about 7.4 million units, while as the requirement is 10 million units.[7] It is important to ensure that there is an adequate supply of blood, and equally important is that the blood collection and transfusion process does not harm either the donor or the recipient .The recommendation for blood donation is that only individuals in good health should be accepted as blood donors. Good health is difficult to define, but certain associated parameters may be established from a brief medical history, observation and simple tests.[8] our study was done to assess the demographic and health status of blood donors in north Kashmir

Methods:

The study was done in blood bank associated with Government Medical College Baramulla in north Kashmir. It was an observational cross sectional study and secondary data was used to collect the information. Data was collected from the records maintained at the blood bank for a period of 3 months from September 2018 to November 2018.The demographic profile along with the physical health profile of the patients was assessed. The haemoglobin level of the donors was found out in the laboratory of the blood bank and was also assessed for the study. The data was entered in Microsoft office excel and analysed. Continuous variables were summarised as mean with standard deviations and categorical variables were summarised as frequency tables.

Results:

A total of 364 donors were analysed. Out of them only 16 were females and only 13 were replacement donors while the majority was voluntary donors (Table 1). Maximum (31 .5 %) donors were O-positive followed by B-positive and A-positive blood groups (Table 2). Only 3 donors were AB negative and this was the blood group with least number of donors available. The mean age of the participants was 30.82 ±8.14 years (95% CI: 29.99 - 31.66) and majority were in the age group of 18 to 30 years (Table 3). The mean weight of the study population was 69.24 ±8.9274 kg (95% CI of 67.84-70.43 kg) (Table 4). The minimum weight was 40 kg and maximum was 100 kg .The mean Hb of the donors was 13. 3 ±0.66 gm/dl (95% CI 13.20- 13.39 gm/dl) with minimum of 11 gm/dl and maximum of 16.5 gm/dl (Table 5).

Table 1: General profile of blood donors

Variables	Number	Percent
Sex		
Male	348	95.6%
Female	16	4.39%
Type of donor		
Voluntary	351	96.4%
Replacement	13	3.5%

Table 2: Distribution of blood groups among the donors

Blood group	Number	Percent
O+	115	31.59
O-	24	6.59
A +	84	23.07
A-	9	2.47
B+	89	24.45
B-	15	4.1
AB+	25	6.86
AB-	3	0.82
Total	**364**	**100**

Table 3: Age distribution of blood donors

Age groups	Frequency	Percentage
18-30	186	51.099
31-40	131	35.989
41-50	44	12.088
51-60	3	0.824
Total	**364**	**100%**

Table 4: Distribution of body Weight of the blood donors

Weight	Frequency	Percentage
Less than 45	1	0.275
45-55	17	4.67
55-65	119	32.692
65-75	156	42.857
>75	71	19.505
Total	**364**	**100%**

Table 5: Haemoglobin levels among the blood donors

Hb range	Frequency	Percentage
11-12	1	0.275
12-13	219	60.165
13-14	117	32.143
14-15	24	6.593
>15	3	0.824
Total	**364**	**100%**

Discussion:

Our study found that majority of the blood donors were males and voluntary donors similar to the findings of other studies. [9] The most common blood group was O positive as also seen in other Indian studies .[9, 10] Majority of blood donors were in good physical health. The health professionals had checked all the necessary parameters before donation. Few of the donors were having weight less than the ideal recommended which is 45 kg.[8] None of the donors were above 60 years of age which is recommended upper age limit of first time donors.[8] In our study there were donors with Hb level less than the recommended level of 13gm/dl for males and 12 gm/dl for females. Majority of blood donors had Hb between 12 -13 gm/dl and only 9 of them were females thus having recommended level of HB but the majority 57% of them were males and having Hb between 12-13 gm/dl .one blood donor was having Hb between 11-12 gm/dl. Such results were also shown in other studies showing similar level of physical health status of blood donors. [9, 11]

Conclusion:

Our study concludes that majority of donors in north Kashmir were young voluntary males with majority having recommended weight and Hb levels for blood donation.

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