

## IMPACT OF EDUCATION ON KNOWLEDGE REGARDING VOLUNTARY BLOOD DONATION: A RETROSPECTIVE STUDY

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**ABSTRACT: BACKGROUND:** Availability of blood and its components is becoming scarce day by day because of increasing demand due to rise in human life expectancy and the implementation of new and aggressive therapeutic methods requiring large quantities of blood and blood products; but supply is not matching with the demand. In many instances replacement donors are not available like in emergency, non-availability of eligible donors among patient attenders, thalassemia patients who require frequent blood transfusion and cannot arrange for replacement donor every time. Supply of both replacement and voluntary blood donors are increasing but still not matching with the increasing demand. **AIMS:** To educate community regarding blood donation and increase the knowledge & willingness for replacement and voluntary blood donation. **MATERIALS AND METHODS:** This was a cross sectional study conducted during blood donation camps during the year of 2012. The blood donation camps were conducted in various colleges. A total of 700 donors comprising of both males and females were taken. Out of these donors 380 had voluntarily donated blood at our Blood Bank of B. L. D. E. University's Shri B.M.Patil Medical College, Hospital and Research Centre, Bijapur Karnataka. **RESULTS:** A total of 383 patients have donated blood voluntarily again in our blood bank. Majority (65%) of donors among respondents donated blood voluntarily, 30% had donated blood only for relatives or friends. A total of 200 (28.5%) men and 80 (11.4%) women had donated blood at least once in the past. **CONCLUSIONS:** The finding of the research indicated that the perceptions toward blood donation could be influenced to a large extent by knowledge significantly related with the occupation and education among the general population.

**KEYWORDS:** Blood donors, Blood donation camps, Education, Voluntarily.

**INTRODUCTION:** Availability of blood and its components is scarce because of increasing demand due to rise in human life expectancy and the implementation of new and aggressive therapeutic methods requiring large quantities of blood and blood products but supply is less than the demand.<sup>(1,2)</sup> To increase the blood donation, education regarding blood donation, promotion, targeted motivation and selection of healthy voluntary blood donors & repeat donors is required.<sup>(3)</sup> Because of scarcity of voluntary blood donation by eligible candidates in developing countries, family replacement and paid blood donors are still the main source of blood & its components.<sup>(4)</sup> No hospital can function efficiently without adequate blood supply.<sup>(5)</sup>

**MATERIALS AND METHODS:** This was a cross sectional study conducted during blood donation camps during the year of 2012. The blood donation camps were conducted in various

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colleges of BLDE Association, Bijapur, Karnataka and other organizations such as NSS. A total of 700 donors comprising of both males and females were taken.

## **Inclusion criteria:**

1. Age between 18 - 60 years.
2. Weight more than 45 kg for males and 50 kg for females.

## **Exclusion criteria:**

1. Persons who have donated blood within last 3 months.
2. Persons with diagnosed diseases like HIV, HBV, HCV, syphilis etc.
3. Persons with recent history of major surgery.
4. Females: active menstrual blood loss, pregnant, abortion within last 3 months, lactation, having child less than 1 year.

**RESULTS:** The response was gathered from a total of 700 respondents voluntarily participated in the survey. The study sample consisted of 450 males (64.3%) and 250 females (35.7%). The mean age of male donors was 30 years and the mean age of female donors was 28 years. Among 700 donors, 280 have donated blood only once and 150 donated blood more than once. Majority (65%) of donors among respondents donated blood voluntarily, 30% had donated blood only for relatives or friends. A total of 200 (28.5%) men and 80 (11.4%) women had donated blood at least once in the past. A total of 383 participants have donated blood voluntarily again in our blood bank after donation in the camps. Education and gender was significantly associated with knowledge of blood donation, whereas blood group and age were not statistically significant.

A total of 700 respondents voluntarily participated in the survey. The study sample consisted of 450 males (64.2%) and 250 females (35.7%). The mean age of male donors was 30 years and the mean age of female donors was 28 years.

**DISCUSSION:** The findings of our study have shown that the knowledge regarding blood donation & hence willingness for voluntary blood donation can be increased to a great extent by educating general population about blood donation. We found that among various occupations, housewives and students had good awareness and attitude towards voluntary blood donation. The awareness of the need of blood in the community was an important motivating factor. The response observed after a national disaster demonstrates that, in those situations, the donors perceive that the benefits associated with giving blood e.g., knowing that one has helped those affected by it(6).

In our research study at the time of blood donation camps we have given speeches regarding need & benefits of blood donation including:

1. How blood is vital to human life. It carries essential nutrients especially oxygen to all the tissues and organs of the body.
2. Timely access to safe blood transfusion is a life-saving measure in many clinical conditions and how it can also prevent serious illness in patients suffering from injuries as in road traffic accidents, child birth related complications and other conditions.

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Hence, blood transfusion services occupy a vital space in any National Health Service delivery system. It was also explained to students that donating blood is not painful and is completely safe for the donor. It takes approximately 5 minutes to donate blood. We only use sterile disposable blood collection bags and needles. Each individual can donate up to 350 ml to 450 ml of blood. The body can replenish this volume within 24 to 36 hours. Whole blood donors can give blood once every 90 days. In India, blood donation can be started at the age of 18 years until 60 years. Minimum weight for blood donor is 45 kg for males & 50 kg for females. Some donors with rare blood groups, i.e. Rh negative group had provided their cell phone number, for use during emergency.

Hiremath et al in their study the response was gathered from a total of 100 respondents voluntarily participated in the survey. The study sample consisted of 64 males (64%) and 36 females (36%). The mean age of male donors was 30 years and the mean age of female students was 26 years. Among 100 donors, 49% have donated blood only once and 51% donated blood whenever there is a need. Majority (67%) of donors among respondents donated blood voluntarily, 30% had donated blood only for relatives or friends. A total of 33 (33%) men and 21(21%) women had donated blood at least once in the past.<sup>(7)</sup> According to study the of Boulware et al showed that 59% of the population had previously donated blood.<sup>(8)</sup> In Tanzania Jacobs et al showed only 3.8% of the population had donated blood previously.<sup>(9)</sup> In our study a total of 200(28.5%) men and 80(11.4%) women had donated blood at least once in the past. A total of 383 patients have donated blood voluntarily again in our blood bank after among those who had donated earlier in the camps. On data collection by asking questions to donors the most important reason for not donating blood was fear of blood donation complications, lack of awareness and false beliefs. Boulware et al study showed that low rates of voluntary blood donation by general population was mainly due to fear of perceived risk of contracting human immunodeficiency virus, lack of awareness of the need for donation and loss of physical vitality after donation.<sup>(10)</sup> The finding of the research indicated that the perceptions toward blood donation could be influenced to a large extent by knowledge significantly related with the occupation and education among the general population.

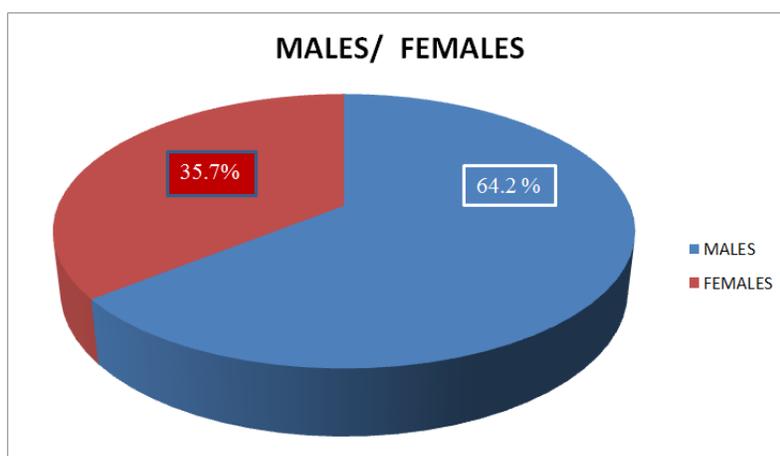
**CONCLUSION:** The finding of the research indicated that the perceptions toward blood donation could be influenced to a large extent by knowledge significantly related with the occupation and education among the general population. The regular flow of voluntary blood donors will have a cumulative effect on the different strata of society leading to a reduction in unnecessary fear associated with voluntary blood donation. Understanding blood donor motivations was crucial to improving effectiveness of donor recruitment and retention programs. We have to sincerely motivate prospective donors in the socio-cultural setting, both inside the hospital as well as in the community.

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**FIGURE 1**

Figure 1 showing statistics among male and female donors. Male donors were 450 (64.3%) and Female donors were 250 (35.7%)

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<b>Education of Blood donor</b>	<b>Yes</b>	<b>No</b>
Primary School	20	-
Secondary High school	38	-
College	168	-
Degree	197	-
Nil	07	-

**TABLE 1: Showing education versus donation after awareness**

<b>Age</b>	<b>Voluntary blood donation after awareness. Yes</b>	<b>No</b>
18-28	204 donors	-
28-38	398 donors	-
38-48	83 donors	-
48-60	15 donors	-

**TABLE 2: Showing age versus donation after awareness**

<b>SEX</b>	<b>Yes</b>	<b>%</b>	<b>No</b>
Male	450	64.2%	-
Female	250	35.7%	-

**Table 3: Showing number of blood donors after awareness**

	<b>Our Study</b>	<b>Hiremath et al.</b>
MALES	450	64
FEMALES	250	36
MEAN AGE (Years)	MALE: 30 FEMALE: 28	MALE: 30 FEMALE: 26

**TABLE 4: Showing comparison our study with the study of Hiremath et al**

Observations are shown above.

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