

Blood donations in North Central Region of Nigeria, motivational and inhibitory factors.

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Abstract

Background: Observable and unobservable characteristics such as gender, place of birth, occupation, health related structural and socio economic incentives and the degree of altruism affect decision to donate blood by an individual.

Aims and Objectives: To determine demographic pattern of blood donors and to assess motivational and inhibitory factors towards blood donations in Nigeria

Subjects and method: Seven hundred and fifty eight consecutive consenting blood donors were recruited for the study. Before blood donation, structured questionnaire was administered to all donors to determine their socio demographic characteristics, motivational and inhibitory factors towards blood donations.

Results: Majority of the donors were 18-30 years (66.2%) and they were all males. Most were single (64.9%), others were married (33.5%) and divorced (1.6%). Students of higher institutions, artisans, civil servants, self employed individuals, corporate individuals and unemployed individuals constituted 46%, 17.7%, 15.4%, 12.3%, 4.7% and 4% respectively. Motivational factors included routine medical examination, to save lives of relations, as personal voluntary service, as group activity, for a fee and for public recognition in 93.4%, 58.7%, 27.2%, 7.9%, 2.9% and 9.2% of respondents respectively while inhibitory factors included fear of HIV test results, fear of being infected during donation, lack of enough blood, fear of becoming sexually impotent after donation and fear of donated blood units being used for rituals in 53%, 50%, 24%, 13% and 7% of respondents respectively.

Conclusion: Appropriate educational program during intensive blood donation campaign will help in increasing blood donor pool.

Key words: Voluntary; Blood; Donation; Motivation; Inhibition; Nigeria.

Introduction

Safe blood transfusion is an essential component of good health care delivery system for any country. Blood transfusion safety is part of measures of reducing the spread of infectious agents like HIV 1 and 2, Hepatitis B and C, Syphilis, prions, and chagas disease. The demand for safe blood and blood products is increasing nowadays as a result of advancement in the practice of clinical medicine and increasing medical emergencies. The death toll from road traffic accidents was shown to increase to a dangerous level in India due to unavailability of blood transfusion services near the accident sites¹.

Millions of lives are saved through blood transfusions,

yet the quality and safety of blood transfusion is still a concern worldwide but particularly in developing nations. Approximately 10-15% of new cases of HIV infections are transmitted through unsafe blood transfusion. This is because in developing nations, blood donations are still being entertained from paid, directed and family replacement donors and there is lack of adequate virological testing on the blood units collected. A nationally (centrally) coordinated blood collection and transfusion service using voluntary non remunerated blood donors, adequate testing of the blood units for the common transfusion transmissible infections using the state of the art testing methods as well as appropriate use of blood and blood products policy have been recommended².

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Voluntary non remunerated blood donors are universally accepted as the bricks of that edifice called Safe Blood Transfusion. Safe blood transfusion has made much of today's surgeries possible with good outcomes.

Although reports from developing countries show the preponderance of relative or family replacement donors amongst their blood donor panel, all countries admitted that the absence of paid blood sellers is not real. They exist in replacement donor category². Both developed and developing countries have problems with voluntary non remunerated blood donation system^{3,4}. The factors that influence an individual's decision to donate blood is a collection of that individual's specific and observable characteristics such as socio demographic factors and unobservable characteristics such as the degree of altruism^{5,6}. Blood donation has also been shown to correlate with the donor gender, place of birth, occupation, prior knowledge about blood donation, social attitudes as well as health related structural and socio economic incentives⁷.

The attitude and beliefs of the people of Nigeria keep them away from voluntary blood donations. Most Nigerians will have remunerations to donate or need to be coerced to do so for benefits they will derive from the hospital³. This study employed community based survey to determine the profile, motivational and inhibition factors towards blood donations in Ilorin and its environ in the north central region of Nigeria. The findings were also compared with those of similar studies done within and outside Nigeria.

Material and Methods

Seven hundred and fifty eight donors were recruited into this study at various sites of blood donations within the North Central region of Nigeria during blood donation drives organized by the Department of Haematology and Blood Transfusion of University of Ilorin Teaching Hospital and the Nigerian National Blood Transfusion Service (NBTS) within a period of one year (Jan-Dec 2007). Donation centers were randomly selected. The donation centers were University of Ilorin Teaching Hospital, University of Ilorin main campus, Kwara State University Molete, Federal Medical Center, Lokoja and Kogi State University, Ayingba.

Background

North central region of Nigeria is one out of the six geopolitical zones of Nigeria. It consists of six states, Kwara, Kogi, Niger, Benue, Nassarawa and Plateau. University of Ilorin Teaching Hospital is located in Ilorin, the capital city of Kwara State and it serves as a referral centre for patients not only within Kwara State but also from neighbouring States like Niger, Kogi, Ekiti, and Osun states with a total estimated population of 15,450,084⁸. This population consists of people of different ethnic and religious groups. More than eight different ethnic groups exist with the three major ethnic groups in Nigeria, Yoruba, Hausa and Igbo well represented. Islam and Christianity are the two main religious groups.

The hospital has a standard blood transfusion unit. Less than 5% of our donors are voluntary non-remunerated, with majority (75%) as family replacement donors and the rest (20%) as paid (commercial) donors. In the quest for blood transfusion safety, the department in collaboration with the North Central Zone of National Blood Transfusion Service, located within the region, organizes blood donation drives periodically.

Data collection:

Data was obtained by means of a standard and previously tested questionnaire, comprising bio- data, socio economic information, educational background, motivational and inhibition factors towards blood donations as well as respondent's medical history.

Results

Seven hundred and fifty eight donors aged 18-62 years with a mean age of 26 ± 7 years were recruited into this study. Majority of the donors (66.2%) fell within the age range 18-30 years and they were all males, Table 1. Male donors predominated over female donors in all the age groups with a male to female ratio of 8.7:1.

Table 1: Distribution of biological factors (Age and Sex) among voluntary blood donors:

Age	Age (years)	Frequency (%)
	18-30	502(66.2)
	31-50	216(28.5)
	>50	40(5.3)
Total		758(100)

Sex	Male	680(89.7)
	Female	78(10.3)
Total		758(100)

Table 2 shows the demographic patterns of all the donors. Most of the donors (64.9%) were single, 33.5% were married while 1.6% were divorced. The most common tribe among the donors was the Yoruba tribe (87%) followed by the Hausa tribe (1.6%) and then the Igbo tribe (1.5%) with other minor tribes constituting 7.9%.

Table 2: Socio economic factors influencing Voluntary Blood Donations

Marital status	Single	492(64.9)
	Married	254(33.5)
Total	Divorced	12(1.6)
		758(100)
Ethnic origin	Yoruba	675(89)
	Hausa	12(1.6)
	Igbo	11(1.5)
	Others	60(7.9)
Total		758(100)
Educational background	University	433(57)
	Secondary school	238(31.4)
	Primary	83(11)
Total	None	4(0.5)
		758(100)
Religion	Islam	411(54.2)
	Christianity	341(45)
	Traditional	6(0.8)
Total		758(100)
Occupations	Civil servants	117(15.4)
	Corporate organization	36(4.7)
	Artisans	134(17.7)
	Self employed	93(12.3)
	Unemployed	30(4)
Total	Students	348(46)
		758(100)

Educational background influenced the decision to donate blood in this study as most, 57%, of the donors were university graduates as against 31.4% who were secondary school leavers, 11% primary school leavers and 0.5% uneducated individuals. The two main religions in the region significantly contributed to blood donation pool, 54.2% and 45% for Islam and Christianity respectively. Considering the occupational status of the

donors, most (46%) were students of higher institutions, followed by artisans (17.7%), civil servants (15.4%), self employed individuals (12.3%), corporate (4.7%) and unemployed individuals (4%).

Table 3: Motivational and inhibitory factors to voluntary blood donation.

Factors	Frequency (%)
Motivation:	
Routine Medical Check-ups	708(93.4)
To save lives of relations	445(58.7)
As personal voluntary service	206(27.2)
As group activity	60(7.9)
For a fee	22(2.9)
For public recognition	70(9.2)
Total	758(100)
Inhibitory:	
Fear of HIV test result	405(53)
Fear of being infected during donation	379(50)
Lack of enough blood	180(24)
Fear of becoming sexually impotent after donation	98(13)
Fear of donated blood being used for rituals	54(7)
Total	758(100)

Almost all the donors (93.4%) were motivated to donate blood because of routine medical examinations carried out during blood donations, while 58.7%, 27.2%, 7.9%, 2.9% and 9.2% donated blood to save lives of relations, as personal voluntary service, as group activity, for a fee and for public recognition respectively.

More than half of the donors (53%) were skeptical to donate blood for fear of HIV test results while 50%, 24%, 13% and 7% were skeptical for fear of being infected during donation, for lack of enough blood, for fear of becoming sexually impotent after donation and for fear of their donated blood units being used for rituals.

Discussion

In this study, male donors predominated. This is in keeping with other studies conducted within and outside Nigeria^{9,10}. This could be attributed to the wrong believe

that females are weaker sex and males have more blood than females. Previous research also found a belief that some people's blood is stronger than others¹¹. This is contrary to what obtains in other climes where there are almost equal sex distributions among blood donors¹². Young blood donors between the ages of 18 and 30 years predominated in this study similar to findings in some studies¹³, but contrary to ages 30 to 40 years found in other studies³ in Nigeria.

Bachelors and spinsters contributed more to the blood donor pool than the married and divorced individuals. Educational status affected the willingness to donate blood in this study as more than half (57%) of all the donors were high school graduate. This also reflected in the socio economic status as most of the donors (46%) were also students. These patterns were similar to the findings in other studies^{6,14}.

Routine medical check-ups, to save lives of relations and personal voluntary service are the main motivational factors for blood donation in this study, similar to findings in other studies¹⁵. Because of poverty and ignorance, most people in developing countries consider blood donations as a cheap means of having medical check-ups and because of the importance attached to family, saving lives of family members is considered a Godly act. A blood donation campaign program incorporating free medical check-ups may be of great benefit in developing nations to attract blood donors.

The fear of HIV test result and the fear of becoming infected during blood donation are major inhibitory factors in about half of all our donors. This is similar to findings in most studies in developing countries^{16,17}. Voluntary Counseling and Testing (VCT) can therefore be incorporated into blood donation drives and campaigns.

Other perceived inhibitory factors like fear of becoming impotent after blood donation or fear of the donated blood being used for rituals should be thoroughly addressed during blood donation campaigns.

Conclusion

Proper education and enlightenment programs are necessary in developing countries to attract first time donors and to improve retention in the blood donor pool

as most of the donors in this study are young. Female donors can also be increased through proper education and counseling.
isolates^{3,4,5}.

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