

SOCIO-DEMOGRAPHIC CHARACTERISTICS AND CATEGORIES OF BLOOD DONORS IN WARRI, SOUTHERN NIGERIA

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SUMMARY

Background: Blood saves lives only when the blood itself is safe. The safety of blood depends on the quality of its donor and these donors can be categorized into commercial, replacement and voluntary blood donors.

Aim and Objective: The aim of this study was to determine the socio-demographic factors and categories of blood donors in Warri, Southern Nigeria.

Materials and Methods: A Semi-structured self-administered questionnaire was used to collect all necessary information from blood donors.

Results: A total of 500 blood donors were surveyed. The mean age was 26.4 years, 97.0% were males, 49.6% had tertiary education, most of the donors were students (42.6%), and only 0.8% of the donors came from the high socio-economic group. Four hundred and eleven (82.2%) were single and 86.2% were christians. In terms of category, 449/500 (89.8%) were commercial donors, 25/500 (5.0%) replacement donors while 41/500 (8.2%) were voluntary donors.

Conclusion: People from low socio-economic class donate blood far more than the upper class and most blood donations are usually from commercial donors. Poverty alleviation in terms of job creation by the Government will go a long way to correct this trend. The National Blood Transfusion Service and all stakeholders in transfusion service should increase awareness campaigns

towards voluntary non-remunerative blood donation.

Keywords: Socio-demographic characteristics, category, blood donors

INTRODUCTION

Blood transfusion in Nigeria currently poses interesting challenges since its introduction into clinical practice. In developing countries like Nigeria, prominent among the challenges of blood transfusion are the issues of transfusion transmissible infections (TTIs) and unavailability of a reliable safe donor pool. The modern transfusion therapy has, as its main objective, to provide appropriate blood components (red cells, platelets, fresh frozen plasma, etc) as opposed to the use of whole blood to treat patients that need specific blood component¹. The challenges associated with donors are quite enormous. The blood donors largely fall into three types: voluntary, replacement and paid (commercial) donors. A replacement donor is a non-remunerated donor who donates before or after the patient is transfused and are usually family members, colleagues or friends of the patients². A voluntary donor donates blood periodically as a matter of principle; while paid donors or commercial donors are individuals who donate blood on payment of an amount of money. Enosolease et al showed that 95.3% of transfused blood come from commercial donors, while 4.7% from replacement and voluntary donors³. In 2007, half

a million units of blood collected from both private and public sources had paid donors accounting for more than 90% of the blood donated⁴. Blood saves lives if the blood itself is safe. The safest is the use of voluntary donors⁵⁻¹⁰. Unfortunately, voluntary donors are in very short supply in Nigeria³. These challenges led to the emergence of National Blood transfusion service (NBTS) in 2005 with one of its policy statements being that blood products should be sourced from low-risk, voluntary, non-remunerated blood donors¹¹. There has been much documentation on the frequency of various types of blood donors but there is paucity of data on the socio-demographic characteristics of blood donors especially in southern Nigeria. Our study therefore sought to determine the social and demographic features and categorization of blood donors in Warri, a cosmopolitan town in Delta state of Southern Nigeria. It is hoped that the information obtained from this study will be utilized to evaluate the policy of blood donor recruitment and retention in southern Nigeria.

MATERIALS AND METHODS

This was an eight-month cross-sectional study carried out at the Central Hospital, Warri between March and October, 2008. The recruitment of blood donors were done by selecting consecutive blood donors who came to donate blood at the hospital. These were

donors that gave their verbal consent for the study and also met the criteria for blood donation¹². Information concerning their socio-demographic characteristics and the category of blood donors were obtained using semi-structured self-administered questionnaire. The social classification was based on criteria by Cecil North 1947. Data was analysed using SPSS version 16.0 software. Frequency distribution tables were used for presentations of selected variables.

RESULTS

There were 500 consenting blood donors. Table 1 shows the distribution of the socio demographic characteristics of the blood donors. The mean age was 26.4 years and the nodal age was between 21-30 years. Most of the donors were males (97.0%) giving a male to female ratio of 32:1. About half (49.6%) of the donors had tertiary education. In terms of occupation, most of the donors were students (42.6%) while only 0.8% of the donors came from high socio-economic group which include the bankers, doctors and civil servants. More than four-fifth of the donors(82.2%) were single and almost same proportion were christians(86.2%). Table 2 shows the categorization of the blood donors. The bulk of the donors were commercial donors(89.8%) while replacement donors and voluntary donors comprised only 5.0% and 8.2%, respectively.

TABLE 1: SOCIODEMOGRAPHIC CHARACTERISTICS OF DONORS

Characteristics	Frequency (%)
Age group (years)	
<20	18(3.6)
21-30	362(72.4)
31-40	104(20.8)
41-50	8(1.6)
>50	8(1.6)
	500(100)
Sex	
Male	485(97.0)
Female	15(3.0)
	500(100)

TABLE 1 Contd.

Characteristics	Frequency (%)
Educational status	
Primary	35(7.0)
Secondary	217(43.4)
Tertiary	248(49.6)
	500(100)
Occupation	
Student	213(42.6)
Driver/conductor	129(25.8)
Unemployed	64(12.8)
Trader	63(12.6)
Mechanic	12(2.4)
Welder	15(3.0)
Banker/doctor/civil servant	4(0.8)
	500(100)
Marital status	
Single	411(82.2)
Married	77(15.4)
Divorced	7(1.4)
Separated	2(0.4)
Widow/widower	3(0.6)
	500(100)
Religion	
Christians	431(88.6)
Muslims	54(10.8)
ATR	15(3.0)
	500(100)

TABLE 2: CATEGORIES OF DONORS

Characteristics	Frequency (%)
Commercial donors	449 (89.8)
Replacement donors	50 (10.0)
Voluntary donors	41 (8.2)
Total	500 (100.0)

DISCUSSION

Whenever indicated, blood must be used in such ways as to minimize patients' exposure to potential hazards, conserve a limited resource and to contain costs. The appropriate use of safe blood and blood components, however, remains a formidable challenge faced by clinicians globally and in particular, the developing nations. It is largely unknown, to our knowledge, to what extent socio-

demographic factors influence and affect blood donation. This study represents the first effort to examine the social and demographic characteristics including the category of blood donors in Warri, a cosmopolitan town in southern Nigeria.

This study showed a mean age of 26.4 years for blood donors, close to that of a report from Ile-Ife with a mean age of 30 years¹³. This mean

age in addition to the modal age of 21-30 years obtained in this study, suggests that the young age group may be embracing the practice of blood donation. The reason for this is because most of the awareness campaigns on blood donation are carried out in schools especially, the Colleges of Education, Polytechnics and the Universities where a good number of the students are in their 20s and 30s. Students are a very formidable group in terms of creation of awareness among the young people to allay fears created by myths and superstitions surrounding blood donation and it is hoped that in the near future a number of the students will continue with regular blood donation as the practice of blood donation has been imbibed in them early in life, thus increasing the pool of donors among the middle age..

Gender plays an important role in blood donation in Nigeria. Almost all the donors in this study were males (97%) in agreement with Port-Harcourt and Kano which recorded 98.7%¹⁴ and 99.8%¹⁵, respectively for males. The main reason females do not donate blood like their male counterparts is fear of development of iron deficiency anaemia¹⁵⁻¹⁷. It has been shown that iron deficiency is very common among regular female blood donors¹⁸.

Majority of the donors were of low socio-economic group namely students, drivers and unemployed while people of high socio-economic group like bankers, doctors and civil servants constituted a paltry 0.8% of donors. This is in support of the fact that most of blood donors in this study are paid donors and poverty has been identified as a major driving force to selling one's blood in Nigeria¹³. The unemployment situation in Nigeria could also be a reason why nine-tenth of blood donors were commercial blood donors. The issue of unemployment should be tackled head-on by the government to reduce commercial blood donation in Nigeria. It has been highlighted that poverty is the main stimulus that make people sell their blood and most of our donors in this

study were people of low-socio-economic status especially*students. The implications of commercial blood donation include the fact that paid donors often come from the poorest sector of society and may be poor in health. They may also be more likely to give blood more often than recommended, be undernourished and more at risk of having Transfusion Transmissible Infections from high risk behaviours especially promiscuity and unprotected sexual intercourse.

Voluntary donors in our study were very few as observed in other studies^{3,15}. The scarcity of voluntary donors is a nationwide problem. There is need to advocate for more voluntary non-remunerated donation with adequate enlightenment campaigns especially to the high socio-economic group to embrace blood donation, these are group of people who are very unlikely to demand financial gratification prior to blood donation. There is need for further studies to find out why the practice of voluntary blood donation is not popular since this is healthier and preferable. However, the fear of being tested for HIV may be discouraging some people from donating especially the people of upper class. Proper counseling and testing during donation may alleviate this fear and increase the pool of voluntary donors. Family replacement donors in our study constituted 8.2% of the study population and these individuals may be willing to convert to voluntary donors if properly and adequately informed moreso when they have seen how blood usage saved the lives of their relatives.

CONCLUSION AND RECOMMENDATION

Our study showed that people from low socio-economic class donate blood far more than the upper class and our blood donations were usually from commercial donors. Reduction of unemployment and alleviation of poverty by the Government will go a long way in correcting this anomaly. The National Blood

Transfusion Service and all stakeholders in transfusion service should increase their awareness campaign towards voluntary non-remunerative blood donation.

Acknowledgement

We thank the management of Central Hospital, Warri for their cooperation during this study.

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