

KNOWLEDGE, ATTITUDES AND PRACTICE OF PEOPLE IN MAIDUGURI, TOWARDS VOLUNTARY BLOOD DONATION

¹Goni BW, ¹Yusuph H, ²Abja UMA, ²Bukar AA, ¹Bakki B, ¹Kida IM, ¹Talle AM, ¹Sahabi AM.

ABSTRACT

BACKGROUND: Voluntary blood donation is an important component of medical therapy. Many avoidable deaths have occurred because blood or blood products needed to save these lives were not available. The need for blood keeps on increasing as reflected by increasing rate of road traffic accidents, complications of pregnancy and child birth, various anaemias and surgical emergencies. **OBJECTIVE:** To document views on blood donation **METHODOLOGY:** A cross-sectional study in which 80 structured questionnaires were administered to respondents. **RESULTS:** The study population comprised of 61 (76%) males and 19 (24%) females. The findings revealed that majority of respondents (57.5%) had enlightenment about blood donation; however only 28.7% had donated blood in the past. Most respondents (42.6%) never donated blood in the past due to the following reasons; 34(42.5) not called to do so, lack of awareness about voluntary blood donation 9 (11.3), fear of HIV screening 6 (7.5), poor nutrition 4 (5.0), ill-health 3(3.8) as well as cultural and religious taboos 6(7.5) against voluntary blood donation. Most respondents (61.17%) said that they could only donate blood either on an emergency basis or to a close relative/ friend if compelled to do so. A substantial proportion of respondents (77.5%) were aware of infections that are acquired through blood transfusion such as HIV (38.6%) and hepatitis B and C viruses (~26%). **CONCLUSION:** Although voluntary blood donation is an important component of medical therapy, very few respondents in the study had ever donated blood in the past and majority would consent to free blood donation only in case of emergency or as family replacement.

Key words: *knowledge, blood donation, infection transmission*

INTRODUCTION

Voluntary Blood Donation can simply be defined as safe, non-remunerative removal of blood from suitable donors in order to save the life of a compatible recipient.¹ Voluntary blood donation is a custom with deep roots in medical practice. Regular and adequate blood donation is necessary to sustain transfusion medicine, defined as that part of the Health System which undertakes the appropriate provision and use of human blood resources.^{2,3}

Blood donor recruitment in Nigeria was previously estimated at less than one per thousand population.⁴⁻⁷ This is grossly low and unacceptable compared with rates of 30 to 50 per thousand population in developed countries.⁸ A survey conducted between April 1999 and June 2002 about the knowledge and attitudes of Nigerian to blood donation, in which structured questionnaires were issued in some 20 Nigerian towns; reported that although many Nigerians knew blood donation and transfusion related issues, lack of definitive donor recruitment strategies and fear of donation were the major impediments to successful donation campaign. On another score there are many superstitious beliefs about blood donation and transfusion in Nigeria.⁶ Culture and Religion are another obstacle to voluntary blood donation practice in our society. Other militating factors include ignorance and declining standard of living.⁵

Even though official policy in Nigeria is that blood donation should be voluntary and non-

¹Department of Medicine, University of Maiduguri, PMB 1069, Maiduguri, Borno State, Nigeria. ²Department of Haematology and Transfusion Medicine, University of Maiduguri, PMB 1069, Maiduguri, Borno State, Nigeria.

Correspondence to: DR BW GONI

Department of Medicine, University of Maiduguri, PMB 1069, Maiduguri, Borno State, Nigeria.
Email: babawaru@gmail.com

remunerative, only a few people practice this. Several studies on the knowledge, attitudes and practice of people about blood donation in Nigeria revealed the apparent difficulties encountered in sourcing for voluntary blood donors. Many Nigerians today appear insensitive to the need for voluntary blood donation even though the demand for blood far exceeds its supply.⁵ At the same time, profound degenerative changes have occurred in the economy which has increased the poverty level.⁶

The need for proper voluntary donor education, motivation, recruitment, selection and retention cannot be over emphasized. In this way blood requirements for major surgical operations, anaemia, and other ailments will be met. Some studies have suggested that government-sponsored programme to supply donors with health-building supplements will reverse this situation.³

Therefore, to have blood we have to rely on ourselves, in order to save lives. It is in light of above that this study was embarked upon

MATERIALS AND METHOD

Study area: the study was conducted within Maiduguri metropolitan council and Jere local government areas of Borno State. Maiduguri has an estimated population of about 1.2 million people according to the 2006 National Population Census figures. The city is cosmopolitan in nature with Kanuri, Babur/Bura, Hausa, Shuwa-Arab, Fulani, Marghi etc. as the major ethnic groups; other ethnic groups from Nigeria and neighbouring countries of Chad, Niger, and Cameroon republics are also found in the city.

Study population: Eighty [80] consecutive adults within the study area who consented to provide information on voluntary blood donation.

Study design: cross sectional descriptive

study.

Sample size: sample size was calculated using Epi Info statistical software, the study was powered to 80% (i.e. $1-\beta$) and α level of 5% was used. The calculated sample size was 72, however 80 consecutive adults who consented to give information on voluntary blood donation were administered structured questionnaires to allow for missing data

PRIMARY SOURCE OF DATA

Primary data was obtained through administration of structured questionnaires by the investigators. Eighty respondents were consecutively interviewed. Socio-demographic information about the respondents such as sex, age, occupation, marital status etc were contained in the questionnaire as well as other relevant information about voluntary blood donation. The survey was conducted between March and June 2007.

The questionnaires were designed based on a pre-study focused group discussion with potential blood donors at the UMTB blood bank and other people in the community within Maiduguri metropolis. Pre-testing prior to the commencement of the study subsequently validated it.

TOOLS AND TECHNIQUES OF DATA COLLECTION

Qualitative technique was employed in the form of structured questionnaires, because the research involves seeking information about people's behaviour towards voluntary blood donation. Trained final year medical students administered the questionnaires to the study participants.

STATISTICAL METHOD

The data was manually entered into a computer database and was subsequently analysed using SPSS version 11.0 (SPSS, Chicago, Ill, USA). Values were expressed as means, averages, and percentages. Descriptive Statistics was

used to analyse the data obtained as averages and percentages. Tables and diagrams were used for illustrations as and when appropriate.

Ethical consideration: Ethical clearance for the study was obtained from the University of Maiduguri Teaching Hospital Ethics and Research Committee.

RESULTS

Eighty respondents in various parts of Maiduguri metropolitan and Jere LGAs were administered structured questionnaires. These respondents included patients and their relatives attending the Blood Bank and the General Out Patient Department of University of Maiduguri Teaching Hospital, Staff of Imam Malik Islamic Centre Maiduguri, Residents of Shehuri North, Fezzan Ward and Federal Low Cost Estate Maiduguri. The age range of the respondents was 20-70 years with a mean age of 37.3 ± 8.25 years, out of these, 61 (76.2 %) were males and 19 (23.8%) females. Of these, 58 (72.5%) had tertiary education, 6 (7.5%) had secondary education, 3 had primary education, 9 (11.3%) had Islamic/Qur'anic education and 4 (5.0%) did not have any form of education. The ethnicity of the respondents reflected the common ethnic groups that are resident in Maiduguri; 36 (45%) were Kanuri, 12 (15%) Hausa, 6 (7.5%) Babur/Bura, 5 (6.3%) Fulani, 4 (5%) Yoruba and Igbo, respectively, 2 (2.5%) Marghi, 1 (1.3%) each of Bade, Bolewa, Bidiri, Jarawa, Kibaku, Glavda, Shuwa Arab, Michika and Mandara, respectively.

Forty-six (57.5%) respondents had received enlightenment about voluntary blood donation in the past, while 33 (41.3%) did not. One (1.3%) was a non-respondent.

In terms of knowledge of diseases that are transmissible through blood transfusion; 62 (77.5%) respondents were aware that there are some diseases that are transmissible through blood transfusion, while 17 (12.3%)

were not. One (1.3%) was a non-respondent. Among those who had knowledge about these diseases; 64 (38.6%) were aware of HIV, 43 (25.9%) aware of Hepatitis, 16 (9.64%) Malaria, 14 (8.43%) Cytomegalovirus, 15 (9%) Toxoplasmosis, 13 (7.83%) respondents were aware of Syphilis, and 1 (1.3%) others (e.g. Yellow fever).

Only 3 (4.7%) of the respondents had received blood transfusion in the past, while 77 (96.3%) respondents were never transfused. However, 53 (63.3%) respondents said that they may one day need blood transfusion, 21 (26.3%) did not think so and 6 (7.5%) were non-respondents.

Fifteen (18.5%) respondents strongly agree that voluntary blood donation should be legislated, 20 (25%) agreed with that, 19 (23%) disagreed, and 1 (1.3%) strongly disagreed with legislating voluntary blood donation.

Sixty eight (85%) respondents thought that voluntary blood donation could be encouraged through publicity and mass media campaigns, while 11 (13.8%) did not agree with the fact that voluntary blood donation could be encouraged through mass media campaigns/publicity.

Six (7.5%) respondents strongly agreed that blood donation should be remunerable, 15 (18.8%) agreed, 36 (45%) disagreed, 7 (8.8%) strongly disagreed while 16 (20%) respondents were not sure whether blood donation should be remunerable or not.

Eight (10%) of respondents strongly agreed that voluntary blood donors should be paid compensation by a social insurance trust fund, 22 (27.5%) agreed with that, 35 (43.8%) disagreed and 3 (3.8%) strongly disagreed. Twelve (14.1%) respondents were not sure whether voluntary blood donors should enjoy social insurance cover or not.

Twenty four (30%) respondents strongly

Voluntary blood donation

agreed with the fact that voluntary blood donors should be acknowledged in the form of national honour, certificate of merit, or medal, 23 (28.8%) agreed with that, 17 (21.3%) disagreed, 3 (3.8%) strongly disagreed and 13 (16.3%) respondents were not sure.

Thirteen (16.5%) respondents strongly agreed with fact that voluntary blood donors should be given a time off from work on blood donation day, 33 (41.3%) agreed, 22 (27.5%) disagreed, and 1 (1.3%) strongly disagreed, while 11 (13.8%) were not sure.

Sixteen (20%) respondents strongly agreed with the fact that voluntary blood donors should be paid for expenses incurred during

blood donation only, 27 (33.8%) agreed, 27 (33.8%) disagreed, 2 (2.5%) strongly disagreed and 8 (10.1%) were not sure.

Thirty-five (43.8%) respondents strongly agree with the fact that traditional/religious leaders have role to play in encouraging voluntary blood donation, 36 (45%) agreed, 4 (5%) disagreed, and 5 (6.3%) were not sure.

Fifty-one (63.8%) respondents knew their blood group while 28 (35.5%) did not. One (1.3%) was a non-respondent. Thirty-five (43.8%) respondents were aware of the National Blood Transfusion Service (NBTS), while 45(56%) were not.

Table 1: socio-demographic characteristics of respondents

| Socio-demographic characteristics | Number of respondents N (%) |
|--|------------------------------------|
| Age range (years) | 20-70 |
| Mean age (years) | 37.2 ± 8.25 |
| Males | 61 (76.2) |
| Females | 19 (28.8) |
| Educational Level: | |
| Tertiary | 58 (72.5) |
| Secondary | 6 (7.5) |
| Primary | 3 (3.8) |
| Islamic | 9 (11.3) |
| Unschoolled | 4 (5.0) |
| Ethnicity: | |
| Kanuri | 36 (45.0) |
| Hausa | 12 (15.0) |
| Babur/Bura | 6 (7.5) |
| Fulani | 5 (6.3) |
| Yoruba | 4 (5.0) |
| Igbo | 4 (4.0) |
| Marghi | 2 (2.5) |
| Others | 9 (11.7) |

Table 2: Age groups of respondents

| Age group (years) N | Male N(%) | Female N(%) | Total N(%) |
|----------------------------|------------------|--------------------|-------------------|
| 20-29 | 11(18.0) | 6 (31.6) | 17 (21.3) |
| 30-39 | 34(55.8) | 7(36.8) | 41(51.3) |
| 40-49 | 11 (18.0) | 4(21.1) | 15(18.7) |
| 50-59 | 3 (5.0) | 0 (0.0) | 3 (3.7) |
| 60-69 | 1(1.6) | 2(10.5) | 3(3.7) |
| ≥70 | 1(1.6) | 0(0.0) | 1 (1.3) |
| Total | 61(100) | 19(100) | 80(100) |

Table 3: Respondents' knowledge of infections that can be transmitted through blood transfusion.

| Infections | number of responses N (%) |
|-----------------------|----------------------------------|
| HIV | 64 (38.6) |
| Hepatitis B&C viruses | 43 (25.9) |
| CMV | 14 (8.4) |
| Malaria | 16 (9.7) |
| Toxoplasma gondii | 15 (9.0) |
| Syphilis | 13 (7.8) |
| Others | 1 (0.6) |

NB: total number of response exceeds 80 because of multiple responses by a single respondent.

Voluntary blood donation

Table 4: Attitudes of respondents towards voluntary blood donation

| Conditions that may make Respondents to donate blood | Number of responses N (%) |
|---|----------------------------------|
| Emergency situations only | 36 (42.4) |
| To family members and relatives only | 14 (16.5) |
| To friends only | 2 (2.4) |
| Only when called to do so | 19 (22.4) |
| Voluntarily | 10 (11.8) |
| Only when covered by a social Insurance fund | 1 (1.2) |
| On remunerable basis only | 1 (1.2) |
| Will never donate | 2 (2.4) |

DISCUSSION

Majority of the respondents in the study belong to the economically active age groups of the population (i.e. 26-45 years). This finding is similar to those reported by Olaiya et al⁷ in Lagos, Nigeria. In addition, most respondents had tertiary education. Their attitudes may be different from the older and younger age groups in the study population. The older and the very young may not have received enlightenment about voluntary blood donation or may be less motivated to donate blood.

Quite a substantial proportion of the respondents had knowledge on voluntary blood donation yet only a handful of them ever donated blood. This finding may lend credence to the fact that public enlightenment alone without motivation may not increase the pool of voluntary blood donors in the society. This is in concordance with findings of Olaiya and colleagues as well as Ezimah et al.^{1,7} According to findings by some workers, the main

motivating factor that mobilises prospective donors is their awareness of the patients need for blood in combination to one's presumption that one day they may also find themselves in need of blood transfusion.^{7,9,10} Other research findings support the claim that altruism and awareness of need are not strong motivating factors.¹¹ This study has shown that people would donate blood if they were called to do so, in emergency situations or if somebody is in vital need for their blood or will get some form of recognition/acknowledgment/refreshment. Thus the above reasons should be taken into consideration when developing a donor recruitment programme.¹²⁻¹⁶

The study has shown that substantial proportion of the respondents agreed with the importance of voluntary blood donation in a society. However, the reason given by majority of respondents for not donating blood in the past; was the fact that they were not called to donate blood¹⁷⁻¹⁹. These reasons were different with

findings from studies in developed countries, in which most respondents said that they did not donate blood because of busy schedules at work as well as lack of time off from work on blood donation day.²⁰

Most of the respondents had enlightenment on blood donation and a substantial proportion of them agreed with the fact that blood donation is important. However, only a score of these respondents had donated blood in the past. The reason for their poor donation was that most of them were not called to donate; hence there is a need to intensify campaign about voluntary blood donation in our communities so that people could be called to donate blood voluntarily in the spirit of altruism. These campaigns should be a continuous process with follow up enlightenments at all levels. The findings from these study also revealed that most of the indications for blood donation in our society were due to conditions like child birth, surgical operations, ill health and road traffic accidents. These findings were similar to those of other studies in sub-Saharan Africa.^{4,20,21}

Most respondents had a fair knowledge about infections that are transmissible via blood transfusion. Notably, nearly 40% of respondents were aware of HIV and about a third knew hepatitis B and C viruses. This could be due to the recent public awareness campaigns on HIV/AIDS and Hepatitis through the mass media. Most of these media campaigns are carried out by government and non-governmental organisations (NGO). Cultural and religious practices did not feature as major impediments toward voluntary blood donation in the study as well as other factors like poor diet and fear of HIV screening, compared to findings in a similar study done in Nigeria.⁶ This could be simply due the fact that most of the respondents were from the educated class.^{22,23,24}

The findings from this study also supported

the fact that voluntary blood donation can be encouraged through publicity and mass media campaigns as well as involvement of religious and traditional leaders in these mass mobilisation programmes. Other factors that could help encourage voluntary blood donor recruitment in our society include; incentives for blood donors like refreshments and cover for expenses incurred during blood donation, as well as social insurance trust fund. The study also highlighted the roles that can be played by factors like blood donor acknowledgments and time off from work on blood donation day for workers in encouraging voluntary blood donation. The study has further shown that publicity on blood donation and legislation (e.g. allowing free access to blood and blood products for regular volunteer blood donors and their families) may increase community participation in blood donation. These findings were similar to those obtained in some European studies.^{12,21-27}

Furthermore, findings from the study revealed that only about a half of respondents were aware of the activities of the National Blood Transfusion Service (NBTS) at the time of the survey. This could have changed since then, however it has become imperative on the NBTS, health institutions, NGOs, religious bodies, traditional institutions, and indeed the general public to intensify public enlightenment campaigns about the activities and services of the NBTS. Everybody is a stakeholder in this all-important task.

Finally as a caveat, a major concern with surveys like this is that it measures the behaviour of respondents not their actual practice. Because what respondents say they do may be different from what they practice in real life, which may be a limitation as in most qualitative studies of its kind.

In conclusion, the study has shown that although most respondents were aware of the importance of voluntary blood donation in our

Voluntary blood donation

society very few had ever donated blood in the past and few were willing to donate blood voluntarily in the future because of the wrong beliefs that blood should be donated only in situations of medical emergency or to close

relatives and friends or only when called to do so. Religious and cultural beliefs were not among the major factors that prevented most respondents from donating blood voluntarily in the past.

REFERENCE

1. ACU Ezimah, Abja UMA, Ureme SO, Agu CS. "Attitude of Nigerians to Blood Donation: Current Views and Realities". *Journal of Applied and Basic Sciences* 2005;3:1-2.
2. David West AS. "Blood Transfusion and Blood Bank Management in a tropical country". *Clin Haem* 1981; 10:1013-1028.
3. FMH, Lagos, Nigeria. "Guidelines on Appropriate use of Blood Products for Nigeria. The National Blood Transfusion Service of the Federal Ministry of Health". *Federal Ministry of Health, Lagos* 1991; 2:8-10.
4. Ahmed S, Abja UMA. "Common indications for blood transfusion in North Eastern Nigeria". *Nigerian Journal of Medicine* 1998; 6:12-18.
5. Okpara RA. "Attitude of Nigerians towards Blood Donation and Blood Transfusion". *Tropical Geographical Medicine*. 1989;41:89-93.
6. Emmanuel JC. "Blood Transfusion services: National Policies, Plans and National Programmes". *16th Congress of the International Society of Haematology. European-African Division, Cairo 5-9 January, 2002*; 234-237.
7. Olaiya MA, Alakija A, Ajala A, Olatunji O. "Knowledge, beliefs, and motivations towards blood donation among blood donors in Lagos, Nigeria". *Transfusion Medicine* 2004;14:13-17.
8. Okpara A. "Transfusion of HIV through blood transfusion". *African Health* 1992;14(5):15-17.
9. Gibbs WN, Cocorran P. "Blood safety in developing countries". *Vox Sanguinis* 1994; 67:377-381.
10. Hollingsworth B, Wildman J. "What population factors influence the decision to donate blood". *Transfusion Medicine* 2004; 14:9-12.
11. Fernandez Montaya A, del Dios L, del Castillo J, Lopez Bernio A. "How some attitudes, beliefs, and motivation of Spanish blood donors evolve over time". *Vox Sanguinis* 1998; 74: 140-147 .
12. Iloya B. "Blood donors motivation and attitude to non-remunerated blood donation in Lithuania". *BMC Public Health* 2006;6:6-16.
13. Federal Ministry of Health, Abuja, Nigeria. "The National Blood Transfusion Policy". *FMOH Abuja, Nigeria* 2000;1:2-4.
14. Andruolaki Z, Merkonris A, Tsouras C, Androulakis M. "Knowledge and Attitudes towards Voluntary blood donation among a sample of students in Tei of Crete, Greece". *Nurs Web J* 2005;23: 23-27
15. Boulware LE, Ranter LE, Ness PM. "The contribution of demographic, medical and attitudinal factors to blood donation among the general public". *Transfusion Medicine* 2002; 31:354-357.
16. Chliaoutakis J, Trakas DJ, Socrataki F. "Blood donor behaviour in Greece: implications for healthy policy". *Soc Sci Med* 1994;1461-1467.
17. Damesyn MA, Glynn SA, Schreiber GB, Ownby HE, Bethel J, Busch MP. "Behavioural and infectious disease risk in young blood

- donors: implication for recruitment". *Transfusion Medicine* 2003;43:1596-1603.
18. Faber JC. "European blood directives: a new era of blood regulation has begun". *Transfusion Medicine* 2004;14:257-273.
19. Ifa SS. In: Introduction to Social Statistics (eds). *Unimaid Press* 1996.12-14.
20. Kieran H. "Embedded altruism: Blood collection Regimes and the European Unions Donor Population". *AJS* 2000;105:1633-1657.
21. Kretschermer V, Weippert-Kretschmer M, Slonka J, Karger R, Zeiler T. "Prospective of paid blood donors and plasma donation". *Transfusion Medicine*. 2004; 31:311-307.
22. Mascaretti L, James V, Barbara J. "Comparative analysis of national regulations concerning blood safety across Europe". *Transfusion Medicine* 2004; 31: 301-307.
23. Politis C. "Blood donation system as an integral part of Health System". *Arch Hellen Medicine* 2000; 17:354-357.
24. Trief D. "Models of altruism as applied to human blood and organ donation". *Penn Science* 2004.2:1-6.
25. Vilnius. "Law on blood donation of the Republic of Lithuania". *Transfusion Medicine* 1996.1:116.
26. WHO. "Global data base on blood safety". *A summary Report. Geneva* 2001; 1998-1999.
27. WHO. "7th Report on the GBSI. Informed consultation on collaboration in training". *Transfusion Medicine* 1991; 2:7-8.
-

Cite this article as: Goni BW, Yusuph H, Abja UMA, Bukar AA, Bakki B, Kida IM et al. Knowledge, Attitudes and Practice of people in Maiduguri, towards voluntary blood donation. *Bo Med J* 2013;10(1):30-38