

Assessment of Donor Satisfaction with the Blood Donation Process during Blood Drive Campaigns and their Intention to Return for Future Donations

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ABSTRACT

Mobile blood drive is an important strategy for increasing the pool of voluntary blood donors; however the major challenge is the retention of these donors, especially the first time donors.

This study was designed to determine the proportion of blood donors who expressed satisfaction with the blood donation process during blood drive campaigns, determine if any, association between overall satisfaction of donors in relation to the donation process as well as the motivating factors to future blood donation by the donors. A cross sectional descriptive study was conducted; participants were recruited using consecutive sampling technique. Data on socio-demography, blood donation history of donors, frequency of blood donation by repeat donors, rating of the donation process, level of satisfaction with the process and motivating factors for future blood donation among other information were obtained from consented blood donors using self-administered questionnaire soon after the donation exercise. Data was analyzed using SPSS for Windows Version 17.0. Significant level was set at $p < 0.05$. Majority of the donors were youths in their mid-twenties and thirties. Their mean age was 26.93 ± 4.19 years. A good number (98.3%) expressed satisfaction with the entire blood donation process. First time donors were more satisfied with the process than the repeat donors. There was a statistically significant association between donor's satisfaction and their intention to donate in future ($p=0.002$). Altruism (to save lives) and incentives such as receiving souvenirs, blood donation certificate, provision of transport fare and operating flexible donation time were the major motivating factors toward future blood donation. In conclusion, the satisfaction of donors regarding the blood donation process was positively associated with their intention to donate again in future. Besides altruism, incentives such as souvenirs, issuing blood donation certificates and operating a flexible blood time among others are important motivating factors to future blood donation.

Keywords: Blood Donor, Satisfaction, Blood Drive

INTRODUCTION

Blood centres globally are saddled with the responsibility of providing safe and adequate supply of blood and blood products. To achieve these goals, blood centres must recruit and retain an appreciable number of blood donors in order to meet the ever increasing demand for blood and blood products by healthcare facilities.

It has been established that over 65% of voluntary blood donations are made in developed countries¹. A survey conducted by World Health Organization (WHO) in 2007 involving 7997 blood centres from 162 countries showed that the average annual blood collection per blood centre was 13600 (range 24-289075) in developed countries and 2800 (114-23251) in developing countries¹.

WHO regional office in Europe 2011 survey showed that 90% of eligible blood donors are not doing so². Therefore, there is need to put in place a more robust blood donor recruitment and retention strategies by blood centres.

Studies have shown that the satisfaction of blood donors in the blood donation process is vital to their recruitment and retention^{3,4}. Satisfaction in a product or service enjoyed has a positive effect on loyalty intentions. A study by Nguyen *et al.*⁵ showed that satisfaction-retention relationship varies depending on certain donor characteristics such as demography. A similar study conducted in a blood bank in Munich Germany, showed that most of the prospective donors were contented or satisfied with service offered, but donor retention was difficult due to deferral reasons⁴. Furthermore, some other authors have reported that repeat donors are more likely to donate again than first time donors⁶. Therefore, contentment or satisfaction in the donation process is an important factor in maintaining donor's loyalty.

Embarking on blood drive campaigns as a strategy for improving safe and adequate blood supply is now a global practice by blood centres.

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Blood drive campaigns advocate for voluntary blood donation via outdoor blood donation camps⁷. Studies have shown that voluntary blood donors provide a safe pool of donated blood compared to family replacement or paid donors⁸. The recent adoption of this strategy (blood drive) in our blood bank has significantly helped to increase our blood supply from voluntary unpaid blood donors. However, the major challenge has been in the retention of these donors.

Retention of blood donors have been recognized as a major challenge facing blood centres globally. A review of about 120,000 donors over a 10 year period in Brazil by some authors showed that 40% and 53% of first time donors returned within one and two years after donation respectively while about 30% never returned⁹. A similar study in the United State of America (USA) showed that only 8% of first time donors return regularly for repeat donations while about 67% never return for further donation in the blood centre¹⁰.

Various factors have been adduced to low donor retention particularly first-time donors including unsatisfactory donation experience, adverse reaction of donation and unnecessary donor deferrals among others⁹. Furthermore, some authors have showed that the effects of deferral on blood donors' return is evident both on first time and repeat donors¹¹.

Therefore, the objectives of the study were to determine the proportion of blood donors who expressed satisfaction with the blood donation process during blood drive campaigns, determine if any, association between overall satisfaction of donors in relation to the donation process as well as the motivating factors to future blood donation by the donors.

METHODOLOGY

Study Site

The study was conducted at three different locations in Akwa Ibom, an oil rich state in the South- South region of Nigeria. The locations include; the National Youth Service Corps orientation camp in Nsit Atai Local Government Area (LGA), the University of Uyo town campus and a faith based religious organization, both in Uyo LGA of the State. These locations were so chosen because they provide a ready source of potential blood donors that cut across all age groups in the society. Temporary blood donation camps were sited at these locations. The blood

drives were organized by the donor recruitment unit of University of Uyo Teaching Hospital (UUTH) Blood Bank.

Study Population

The study population were eligible blood donors selected from the pool of prospective blood donors who presented at the blood donation camps. The selection was based on the WHO donor selection criteria¹². All the donors were given health education on the social importance as well as the health benefits of regular donation. The blood drive campaigns were conducted between March and April 2014 at the different locations.

Study Design

This was a cross-sectional descriptive study, designed to achieve the set objectives of the study.

Sampling Method

A consecutive sampling technique was used to recruit donor into the study. A total of 111 eligible blood donors were enrolled into the study from the three locations.

Inclusion and Exclusion Criteria

Blood donors who met the WHO blood donor selection criteria and who gave informed consent were enrolled into the study while those who met the donor selection criteria but who did not give consent were excluded from the study.

Data Collection

Data on socio-demography, blood donation history of donors, frequency of blood donation by repeat donors, rating of the donation process, level of satisfaction with the process and motivating factors for future blood donation were collected using pre-tested well structured and self administered questionnaires. The questionnaires were administered to each donor soon after they had finished the blood donation exercise and retrieved thereafter. Donors were not allowed in the company of other donors while filling out the questionnaire so as not to be biased or influenced by the opinion of other donors.

The blood donation process were rated from 1 to 5; with 1-Poor, 2- Fair, 3-Good, 4-very good, 5-Excellent. A score of 1-20% was regarded as poor; 21-40% -Fair; 41-60 % -Good; 61-80 %-very Good; 81-100%- Excellent

Data Analysis

The data was analyzed using SPSS for Windows Version 17.0 (SPSS Inc., Chicago, IL, USA) and presented in simple tables and chart. Descriptive statistics was done and categorical variables were compared using chi-square, the p-value was considered to be statistically significant when less than 0.05 (p<0.05).

Ethical Consideration

Signed informed consent form stating in clear terms, the purpose of the study was obtained from each participant prior to the administration of questionnaire. Also, ethical approval was obtained from the Ethics and Research Committee of UUTH before the commencement of the study.

RESULTS

A total of 111 eligible blood donors participated in this study of whom 65(58.6%) were males and 46(41.4%) were females, giving a male to female ratio of 1.4: 1. All the donors were less than 50 years of age. A good number 94(84.7%) were within the age bracket of 20-29 years with a mean of 26.93 ± 4.19. Also, most 80(72.1%) of the donors were educated up to the tertiary level. About two-third 76(68.5%) were first time donors while others were repeat donors (Table 1).

DISCUSSION

Majority of the blood donors (46.4% and 45.5%) rated the blood donation processes as "very good and excellent. None rated it poor. (Table 2)

Table 1: Socio-Demographic Characteristics of Blood Donors and Frequency of Donation by Donors

Characteristics	Frequency (%)
Sex	
Males	65 (58.6)
Females	46 (41.4)
Age Group	
20-29	94 (84.7)
30-39	14 (12.6)
40-49	3 (2.7)
Marital status	
Single	100 (90.1)
Married	11 (9.9)
Educational Level	
Primary	10 (9.0)
Secondary	21 (18.9)
Tertiary	80 (72.1)
Religion	
Christian	107 (96.4)
Muslims	3 (2.7)
Others	1 (0.9)
Donation history	
First time donors	76 (68.5)
Repeat donors	35 (31.5)
Donation Freq/yr by Repeat donors (n=35)	
1	12 (34.3)
2	11 (31.4)
3	8 (22.9)
4	4 (11.4)

Table 2: Donors' Assessment of some of the Blood Donation Processes

Factors	Rating of Blood donation process n (%)				
	Poor	Fair	Good	Very good	Excellent
Blood donation site/environment	0 (0)	3 (2.7)	41 (36.9)	44 (39.6)	23 (20.7)
Courtesy from Donor Recruitment staff	0(0.0)	3 (2.7)	16 (14.4)	41 (36.9)	51 (45.9)
Skill of phlebotomist	0(0.0)	3 (2.7)	22(19.8)	43 (38.7)	43 (38.7)
Level of Appreciation by staff after donation	0(0.0)	2 (1.8)	20 (18.0)	43 (38.7)	46 (41.4)

Figure 1 shows donor's overall rating of the blood donation process.

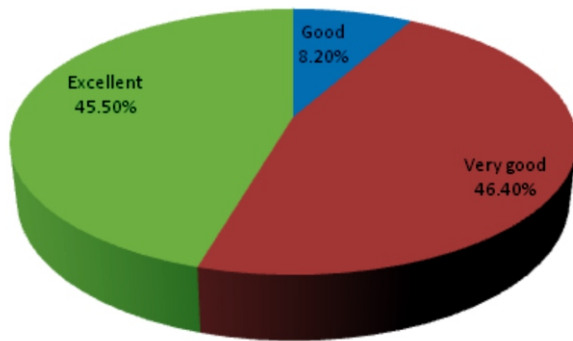


Figure 1: Respondents' Overall Rating of the Blood Donation Process

All the donors had health education on the importance and health benefits of blood donation, with as much as 76% being influenced to donate by the information they received. Also, more than 70% of the donors (males and females) had tertiary education (Table 3).

Table 3: Proportion of Donors who Received Health Education before Blood Donation

Characteristics	Frequency (%)
Received Health education before donation	
Yes	111 (100)
No	0 (0.0)
Satisfied with the health education talk	
Yes	98 (98.3)
No	2 (2.0)
Health education influenced donating blood	
Yes	76 (76.0)
No	24 (24.0)
Educational Status of donors	
Female Donors (n=46)	4 (8.7)
Primary	9 (19.6)
Secondary	33(71.7)
Tertiary	
Male Donors (n=65)	6 (9.2)
Primary	12 (18.5)
Secondary	47 (72.3)
Tertiary	

Eighty-seven percent of the donors expressed satisfaction with the entire process of blood donation with over 90% indicating their willingness to donate again in the future. First time donors were more satisfied with the donation process than repeat donors. (Table 4)

Altruistic reason (35.1%) i.e. to save lives was the major motivating factor towards future blood donation. Others include issuing of blood donor certificate (25.2%), provision of transport fare (22.5%) and flexible blood donation time (21.6%) (Table 4).

Table 4: Proportion of Donors satisfied with the Blood Donation Process, Intention to Return for Future Donation & Motivators for Future Blood Donation

Characteristics	n (%)
Satisfied	97(87.4)
Not Satisfied	3(2.7)
Indifferent	11(9.9)
Satisfaction by Gender	
Females	42(91.3)
Males	56(86.2)
Satisfaction by Donor History	
First time Donors	69(90.8)
Repeat Donors	29(82.9)
Intention for Future Donation	
Yes	100(90.1)
No	2(1.8)
Indifferent	9(8.1)
Motivators for Future Blood Donation	
Flexible blood donation time	24 (21.6)
Receiving of Souvenirs	6 (5.4)
Issuance of Blood donor certificate	28(25.2)
Provision of Transport fare	25(22.5)
To save lives	39(35.1)
Provision of Refreshment	2(1.8)
No Response	9(8.1)

Furthermore, statistical significant association was demonstrated between overall satisfaction of donors with the donation processes and their intention/willingness to donate again in future. (Table 5)

Table 5: Association between some Donor Characteristics and their Willingness/intention to donate in the future

Characteristics	Willingness/Intension for Future Donation			Test of Statistics and Statistical Values
	Yes	No	Indifferent	
Satisfaction with Blood Donation Process				
Yes	92(93.9)	1(1.0)	5(5.1)	$\chi^2 = 32.290$ p= 0.002* df=4
No	2(66.7)	1(33.3)	0(0.0)	
Indifferent	6(60.0)	0(0.0)	4(40.0)	
Donor History				
First Time donors	66(86.8)	1(1.3)	9(11.8)	$\chi^2 = 4.743$ p= 0.062* df = 1
Repeat donors	34(97.1)	1(2.9)	0(0.0)	
Age Group				
20-29	86(91.5)	2 (2.1)	6(6.4)	$\chi^2 = 3.953$ p= 0.196 df = 4
30-39	12(55.7)	0 (0.0)	2(14.3)	
40-49	2(66.7)	0 (0.0)	1(33.3)	
Education				
Primary	10(100.0)	0(0.0)	0(0.0)	$\chi^2 = 5.342$ p= 0.281 df = 4
Secondary	17(81.0)	0(0.0)	4(19.0)	
Tertiary	73(91.3)	2(2.5)	5(6.3)	

*Fisher's Exact

Majority of blood donors in this study were youths between the ages of 20-30 years. This agrees with the WHO 2011 fact sheets on blood donors' demographics which shows that the predominant donor population in middle and low income countries were youths in their mid twenties and thirties¹³. It also agrees with the study by some researchers in India in which majority of the blood donors were youth within the above age bracket¹⁴. The above age distribution also agrees with similar studies among blood donors in Ibadan and Port Harcourt in South-Western and South-South regions of Nigeria respectively^{15,16}. More than 50% of the donors surveyed were males. Studies from most Sub-Saharan African countries including Nigeria have reported male dominance in blood donation exercise^{17,18}. A recent survey of francophone countries in Central, Western and Eastern African region reported less than 30% female participation in blood donation¹⁹. Female participation of 41% recorded in this study is much higher than those of previous

studies reported above, perhaps educational status of the donors may have accounted for this observation. Although, there was no association between donor's educational status and their intention to return for future donations, education nonetheless has been reported by some authors as an important factor that influences donor's attitude towards blood donation²⁰.

In keeping with other studies with similar demographic characteristic, a good number (87.4%) of donors were satisfied with the blood donation process with most of them (46.4% & 45.5%) rating the process as very good and excellent respectively. Nguyen et.al⁵ reported high satisfaction ratings of the blood donation process by more than 75% of blood donors studied. Ahuja et al.²¹ also reported similar observation. Indeed, studies have shown that the friendly, courteous and competent disposition of blood centres' staff as well as the quality of health education received before the blood donation exercise have positive influence or impact on donors' satisfaction²². All

the donors in this study received health education before the blood donation exercise with 76% alluding to the influence of this information on their decision to donate.

Furthermore, First time donors expressed a much higher rate of satisfaction (91.8%) than the repeat donors (82.9%). Similar finding has been reported by other authors where the first time donors had higher satisfaction ratings than repeat donors^{5,21}. This group of donors perhaps were excited by their first experience of donating blood and the altruistic feeling of having done something noble, hence may have overlooked some inadequacies in the process. Healy²³ described blood donation as the purest form of altruistic behaviour. Altruistic values have been shown to be an important factor in ensuring committed and loyal behaviour among first time donors^{24,25}.

Similar to findings from other studies,^{5,21} the female donors were more satisfied with their blood donation experience than their male counterparts. Nguyen *et al.*⁵ reported that this observation could possibly be as a result of the strong altruistic attitude of women while Steele *et al.*²⁴ found that male donors have lower pro-social characteristics (altruism, empathy and social responsibility) ratings than female donors.

The satisfaction derived in a product or service has a positive effect on loyalty and intentions. This study has shown that a good number (90%) of the donors expressed willingness or intention to donate blood again in future. There was also a statistically significant association between overall satisfaction of donors with the blood donation processes and their willingness or intention to donate again in future ($p=0.002$). This finding is in keeping with those from previous studies, Nguyen *et al.*⁵ and Ahuja *et al.*²¹ both reported a similar association between donor satisfaction and their intention for future donation. A related study by some authors in Italy to investigate adolescents' propensity to donate blood revealed that the young people were quite interested in donating blood; however they lack the commitment and the awareness to make it happen. Hence, they suggested an effective health education campaign aimed at recruitment and retention of young people as blood donors by blood centres.²⁶ In addition, Newman *et al.*²⁷ showed that the quality of service rendered by a blood centres goes a long way in determining the

retention and continuation of blood donation by eligible donors. Therefore, satisfaction with the blood donation processes is an essential factor in building and maintaining donor's loyalty.

Comparable with other studies, the main motivating factor to future blood donation by the donors was their desire to save lives. This desire is purely altruistic in nature. Hupfer *et al.*²⁸ identified altruism as the most important reason for blood donation among Canadian students. However, some other authors have reported contrary views. Ferguson *et al.*²⁹ reported that committed blood donors were more willing to donate blood when exposed to benevolence rather than altruistic messages. Thus, they recommended that blood donation campaigns should focus more on benevolence rather than purely altruistic messages.

Other motivating factors to future donation identified in this study could be categorised as incentives, this include; giving of souvenirs, issuing of blood donor certificate, provision of transport fare and refreshment. A study among volunteer blood donors at Shiraz blood centre in Iran showed that a quarter (25%) of the respondents believed that incentives encourages blood donation³⁰. Two previous studies from South-Western Nigeria also reported respondents' preference for incentives as important motivating factor to blood donation^{31,32}.

Operating flexible blood donation time has been shown in some studies to aid and encourage blood donation. In one of such study, 23% of lapsed donors and 44% of non donors were of the view that flexible blood donation time could further encourage blood donation^{33,34}. A similar observation was recorded in this study where 24% of the respondents believed that operating a flexible blood donation time could motivate them to date in future. Most blood centres in developed countries have incorporated flexibility in their blood donation time into their operations³⁴. The flexibility/convenience in the blood donation time was found to be more appealing to the younger generation of blood donors and it is believed that this could invariably surpass altruism as the major motivating factor to blood donation by this group of donors³⁴.

CONCLUSION

This study like other previous studies have shown that there is an association between

donor's satisfaction with the donation processes and their intention/willingness to donate again in future. Also, beside altruism other factors including incentives and operating a flexible blood donation time have been identified as important motivating factors to future blood donation. We hereby suggest the sustenance of the ongoing effort in blood drive campaigns and the introduction of some incentives in other to enhance donor retention in our centre.

Conflict of interest: The authors declare no conflict of interest.

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