

# Perception and Practice of Voluntary Blood Donation during emergency situations among Nurses in University of Nigeria Teaching Hospital, Enugu- Nigeria

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## Abstract

In developing countries, established blood supplies are limited and donors usually give blood when family or a friend needs a transfusion. This study examined the perception and practice of voluntary blood donation during emergency situations among nurses working in University of Nigeria Teaching Hospital (UNTH) Enugu State. The objectives of the study were to determine the perception, practice and barriers to voluntary blood donation (VBD) during emergency situations among nurses. The study adopted a descriptive cross sectional design. A sample of 237 nurses were selected for the study. Questionnaire was used for data collection. Data collected were analyzed using descriptive statistics and results were presented in frequency, and percentage. The result showed that respondents have positive perception of voluntary blood donation with overall mean score of  $2.71 \pm 0.79$ . There is poor practice of blood donation 210(84.8%) among respondents. The major factors that negatively affect the practice of voluntary blood donation included not having enough blood to spare, lack of incentives to donors, lack of government support, and blood bank will sell the donated blood unit. It was recommended that the hospital management should organize seminars and workshops to educate nurses on voluntary blood donation.

**Key words:** Perception, practice, voluntary blood donation, Nurses, emergency situation.

## Introduction

Blood is a specialized body fluid in humans that delivers necessary substances such as nutrient and oxygen to the cells and transport metabolic waste product away from those same cells (The Franklin Institute Incorporate, 2014). It is composed of blood cells (erythrocytes, leukocytes, and monocytes) and platelets which are suspended in liquid medium called plasma (Shazia, 2012). Blood is only manufactured by human beings and human donation is the only way of acquiring blood to meet emergency requirements (Olaiya, Alakija, & Afala, 2014). Blood donation is an act of giving one's blood to another through transfusion. It is an act that can save the lives of thousands of people worldwide. Blood transfusion is still one of the main components of care and treatment to patients with serious conditions such as trauma, major surgeries, chemotherapy, and patients in need of long term therapies (Nwabueze, Nnebue, Azuiké, Ezenyeaku, Aniagboso, Ezemonye, & Azuiké, 2011).

Problems regarding a permanent shortage of blood for transfusion are observed in blood services all over the world especially in Africa. Studies have shown that among medical and health care workers, the knowledge of blood donation is high, however the practice of blood donation have consistently remained low (Salaudeen, & Odeh, 2011). Globally, 80 million units of blood are donated each year but only two million units are donated in sub-Saharan Africa where the need is enormous (Salaudeen, & Odeh, 2011). In Nigeria, although half of the population in the country is medically fit for donation, only four in a thousand donate blood (Ose, Angadi, Masali, Bhat, Shashank, & Wajantri, 2013).

In the developed countries, most blood donors are unpaid volunteers who give blood for a community supply while in developing countries, established supplies are limited and donors usually give blood when a family or a

friend needs a transfusion. Voluntary blood donation accounts for less than 5% of blood procured in most part of developing countries (WHO, 2010). Some donors donate blood as an act of charity while others are paid money or in some cases, there are incentives like paid time off from work (Olaiya, Alakija, & Afala, 2014). While some donors called autologous donor donates blood for themselves and store it till the time it is needed (this is common among Jehovah witness denomination) (Nwogoh, Aigberadion, & Nwannadi, 2013), Salaudeen, (2011) found out that few people donate blood voluntarily. Among the few that donate blood, majority donate for friends.

In emergency cases, blood is usually obtained from patient's guardians/relatives. Blood can also be obtained from health care personnel, private laboratories, blood banks and commercial blood donors, popularly known as "blood touts". Health personnel such as nurses can be a quick source of quality blood during emergency as such voluntary blood donation among health care personnel needs to be strengthened, promoted accepted and practice for safe blood supply during emergency. Extant literature (Archana, 2014) showed that nurses who donate blood, donated for family replacement and inadequate information about the blood donation process, fear of exposure to HIV/ Hepatitis infection, fear of fainting, fear of contracting possible illness afterward, inconveniences of giving blood deter people from donating blood while, lack of trust, people not being sure whether the blood they donate will be properly used or not and the feeling that blood can be bought are negative perceptions of blood donors which have been identified as hindering the practice of blood donation (Offiong, 2011; \_Melku, Terefe, Asrie, Enawgaw, Melak, Tsegay, Areba, and Shiferaw, 2016).

The researchers' observed in University of Nigeria Teaching Hospital (UNTH) Enugu that, emergencies (fatal road traffic accident, post-

partum haemorrhage, gunshot injuries and some other surgical emergencies) requiring urgent blood transfusion are often delayed due to shortage of blood in the blood bank with available nurses refusing to donate blood except on condition of compensation, this thereby leaves such patients at the mercy of death. This study is therefore necessitated by the need to investigate the nurses' perception towards voluntary blood donation during emergency in University of Nigeria Teaching Hospital, Enugu. This most often leads to the death of many patients. This necessitated the researcher to examine the perception and practice of voluntary blood donation among nurses in UNTH.

### **Purpose of Study**

The purpose of the study is to examine the perception and practice of voluntary blood donation during emergency Situations among nurses in University of Nigeria Teaching Hospital, Enugu State

The specific objectives are to:

1. determine the perception of voluntary blood donation during emergency among Nurses of UNTH.
2. determine the practice of blood donation during emergency among Nurses of UNTH.
3. determine the perceived barriers to voluntary blood donation during emergency among Nurses of UNTH.

### **Hypothesis**

There is no association between respondents' perception of voluntary blood donation and the cadres in nursing.

### **Research Design:**

A descriptive cross sectional survey research design was used for the study. This design was

used because it best describes the opinion of the subjects without influencing them in anyway

### **Area of Study**

This study was carried out in University of Nigeria Teaching Hospital (UNTH) Ituku/Ozalla, The hospital began early in the 20<sup>th</sup> century and transform into specialist hospital with effect from 1<sup>st</sup> July, 1970. Is a center for cardiac surgery, It is presently at its permanent site. It offers both primary and specialist care to patients in Enugu state of Nigeria and its environment. It is the highest referral center for south Eastern part of Nigeria. It has considerable large clientele, being a tertiary hospital for referrals. This particularly makes it a suitable research centre, it is a tertiary institution that is made up of 665 Nurses, total number of 425 beds, 20 functional wards, like: intensive care unit, oncology unit, renal unit, reproductive health unit etc. Departments like, Nursing services, social works, records, pharmacy, physiotherapy, theatre etc. This tertiary hospital serves as referral centre for all other health centres or clinics within Enugu and even beyond. University of Nigeria Teaching Hospital is a federal government hospital built to care for the sick within the Enugu metropolis and beyond. It is located alone Enugu-Port-Harcourt express way.

### **Population of study**

The population of the entire UNTH Nurses at the time of the study was 398. However, the target nurses working in the 26 wards was 249 (List of nurses UNTH 2016, see Appendix IV). These comprise nurses under the following cadres: Principal Nursing Officers (PNO), Senior Nursing officers (SNO), Senior Nursing Sister (SNS), Nursing Officer I (NO I), Nursing Officer II (NO II) and Nursing Sister (NS).

**Subject of the study:** All the nurses working in the selected in-patient wards of the hospital who

meet the inclusion criteria of been available at time of study, willingness to participate in the study and nurses of all cadres were used for the study.

**Instrument for Data Collection:** The instrument used for data collection was questionnaire which was developed by the researcher. The items in the questionnaire were generated based on existing literature, with respect to the objectives of the study. The questionnaire consists of four sections; section A- Demographic data, section B- Perception of voluntary blood donation, C- Practice of voluntary blood donation, while section D deals on barriers to voluntary blood donation.

**Validity of Instrument:** The questionnaire was submitted to two experts within the department of nursing science, University of Nigeria, Enugu Campus who made necessary criticism and necessary corrections and ensure that the contents of questionnaire relates to the objectives of the study before the questionnaire was administered, hence content validity was established in the study.

**Reliability of Instruments:** In order to establish the reliability of the instrument, 10% of sample size, which is 25 nurses, was selected and copies of questionnaire were administered to nurses working in Enugu State Teaching Hospital (ESUTH) Parklane Enugu, these groups of nurses has similar characteristics and are not members of the study group. Data generated from the pre-test survey was subjected to Cronbach's alpha test with a result of 0.82 which showed that the instrument is 82% reliable.

**Method of Data Collection:** Three research assistants were recruited and trained by the researchers on the purpose of the study and the method of administering copies of the questionnaire. The data for the research was collected meeting the respondents at various wards and introduction of the researcher and the

purpose of the study to the respondents. All questionnaires were filled and collected on the spot in each of the shift. Distribution and collection of questionnaire lasted for one week.

**Method of Data Analysis:** The analysis of data was done using simple descriptive statistics of frequency and percentages. Results were presented in tables. Statistical Package for Socio Sciences (SPSS) version 22 was used for the analysis. Objective one which contains 9 questions structured in four Likert format was analyzed by attaching a weight of 4, 3, 2 and 1 for strongly agree, agree, disagree and strongly disagree respectively. Individual perception was computed by adding the responses on each question utilizing the weight attached and dividing by the total number of questions. The perception was then categorized based on mean of 2.5 and above as positive perception while mean below 2.5 was categorized as negative perception. The research hypothesis was tested using chi-square at 0.05 level of significance.

**Ethical Considerations:** In order to obtain ethical clearance, a letter of introduction from the Head of Department of Nursing Sciences, University of Nigeria, Enugu Campus, an application letter and summary of research protocol were sent to Health Research Ethics Committee of University of Nigeria Teaching Ituku/ Ozalla and approval was given. Consent was obtained from the respondents before the administration of the questionnaire. The researcher ensured that the respondents were not exposed to the possibility of injury during study. The nurses have the right to choose whether to participate or not, full disclosure and maximum confidentiality of information received from respondents was maintained.

## Results

From the 249 questionnaire that were administered, only 237 were returned making a return rate of 95.2%, hence 237 questionnaire were used for the study.

**Table 2: Socio-Demographic Data of the Respondents n = 237**

Category	Option	Frequency	Percentage
Age Range	Mean	36.61	
	SD	11.50	
	15-25years	4	1.7
	26-35years	70	29.6
	36-45years	61	25.7
	46-55years	70	29.5
Religion	55-60years	32	13.5
	Muslim	15	6.3
	Christianity	215	90.7
	African traditional religion	7	3.0
Marital status	Married	186	78.5
	Single	34	14.3
	Widow	17	7.2
Cadre in nursing	Nursing officer	66	27.9
	Senior nursing officer	94	39.7
	Principal nursing officer	41	17.3
	Asst/Chief nursing officer	36	15.2
Years of working experience	1-10years	58	24.5
	11-20years	115	48.5
	21-30years	28	11.8
	31years+	36	15.2

bracket 23-35 years while 61(25.7%) are within 36-45 years of age. Majority 215(90.7%) of the respondents are Christians while 186(78.5%) of the respondents are married. While 115(48.5%) have a working experience between 11-20 years.

Table 2 shows the Socio-Demographic data of the respondents. The mean and S.D of the respondents' age was  $36.61 \pm 11.50$ . Only 70 (29.5%) of the respondents are between the age

**Table 3: Respondents' Perception of Voluntary Blood Donation**

n=237

Category	SA Freq (%)	A Freq (%)	D Freq (%)	SD Freq (%)	mean	S.D
Blood donation is a good practice that saves lives.	192(81.0)	45(19.0)	-	-	3.81	.393
During emergency, blood donated to patients can save them from dying.	126(53.2)	75(31.6)	28(11.8)	8(3.4)	3.35	.817
Donating blood makes the donor weak.	22(9.3)	100(42.2)	92(38.8)	23(9.7)	2.51	.795
I get a good feeling whenever I see the blood bank logo, or an advertisement for blood donation.	58(24.5)	113(47.7)	66(27.8)	-	2.97	.724
I think blood donation is beneficial to my health and the patient.	42(17.7)	103(43.5)	87(36.7)	5(2.1)	2.76	.759
Withholding blood by a way of refusal to donate can lead to someone's death especially those in emergency situation.	94(39.7)	60(25.3)	63(26.6)	20(8.4)	2.96	1.001
I think I will donate blood only during an emergency situation.	5(2.1)	54(22.8)	96(40.5)	82(34.6)	1.92	.809
I feel those who donate blood in emergency should be rewarded.	55(23.2)	83(35.0)	75(31.6)	24(10.1)	2.71	.935
Donating blood will result in a loss of donor's life.	8(3.4)	33(13.9)	14(5.9)	182(76.8)	1.43	.854
Overall mean					2.71	.787

The table 3 shows that out of 237 respondents, 192(81.0%) and 45(19.0%) strongly agreed and agreed with a mean and SD of  $(3.81 \pm .39)$  that blood donation is a good practice that saves lives. Similarly, 126(53.2%) and 8(3.4%) strongly agreed and strongly disagreed with a mean and SD of  $(3.3460 \pm .81726)$  that during emergency, blood donated to patients can save them from dying. Meanwhile 113(47.7%) and 58(24.5%) of the respondents agreed and strongly agreed that they get a good feeling whenever they see the blood bank logo, or an advertisement for blood donation  $(2.9662 \pm .72407)$ . In general, the respondents have positive perception of blood donation with an overall mean of  $(2.71 \pm .787)$ .



**Table 4: Respondents Practice of Blood Donation**

**n = 237**

Category	Option	Frequency	Percentage
Ever donated blood	Yes	36	15.2
	No	201	84.8
If yes, how long ago	Three months and below	9	25.0
	Six months ago	5	13.9
	One year ago	17	47.2
	2 years and above	5	13.9
How frequently	Every three months	8	22.2
	Every six months	5	13.9
	Once a year	9	25.0
	When I feel like	14	38.9
Who motivated your choice for donating blood	My friends/relatives that need it	15	41.7
	I donated because of its health benefits	17	47.2
	There was an emergency	4	11.1
Place of donation	In a health center/hospital	15	41.7
	At the blood bank	17	47.2
	In school (Non health facility)	4	11.1
Who did you donate blood with	NBTS team	26	72.2
	Medical doctor	5	13.9
	Other health personnel	5	13.9
Reasons for not donating blood	Lack of awareness	57	28.4
	Causes weakness	111	55.2
	Inappropriate use of available blood	24	11.9
	Female are hardly allowed to donate blood	5	2.5
	No time to donate	4	2.0

Table 4 shows the respondents practice of blood donation. Majority 201(84.8%) of the respondents had never donated blood before. 17(47.2%) of those that had donated blood did it last year while only few 5(13.9%) donated in the last 2 years. Also 14(38.9%) donates when the feel like donating and 9(25.0%) donates once in a year. Less than average 15(41.7%) donated for their friends/relatives while 17(47.2%) donated because of the health benefits. 26(72.2%) donated with the Nigeria blood transfusion service team. Among those that have never donated, 111(55.2%) mentioned that blood donation causes weakness

**Table 5: Respondents Barriers to Voluntary Blood Donation n=237**

Category	Yes Freq (%)	No Freq (%)
Blood donation is time consuming.	8(3.4)	229(96.6)
Blood donation causes weakness and fainting to the donor.	91(38.4)	146(61.6)
Not having enough blood to spare.	198(83.5)	39(16.5)
The fear of contracting diseases like hepatitis, HIV etc.	72(30.4)	165(69.6)
Blood bank will sell the donated blood unit.	110(46.4)	127(53.6)
Lack of donation venue.	39(16.5)	198(83.5)
My religion does not support blood donation.	31(13.1)	206(86.9)
My culture does not support blood donation.	37(15.6)	200(84.4)
I avoid blood donations for medical reasons.	86(36.3)	151(63.7)
Lack of government support.	129(54.4)	108(45.6)
Lack of incentives to donors.	147(62.0)	90(38.0)
Friends' discouragement.	40(16.9)	197(83.1)

Table 5 shows that out of 237 respondents, 198(83.5%) mentioned that not having enough blood to spare is not a barrier to voluntary blood donation while 165(69.6%) of them mentioned that fear of contracting diseases like hepatitis, HIV etc is not a barrier to voluntary blood donation. 147(62.0%) of the respondent said lack of incentives to donors is a barrier to voluntary blood donation. 200(84.4%) said their culture is not a barrier to voluntary blood donation. 197(83.1%) out of 237 of the respondent said friends discouragement is not a barrier to voluntary blood donation. 229(96.6%) of the respondents said blood donation being time consuming is not a barrier to voluntary blood donation.

Hypothesis: There is no association between respondents' perception of voluntary blood donation and their cadre in nursing.

**Table 6: Cross tabulation between cadre in nursing and nurses perception of voluntary blood donation**

		Perception of VBD		Total
		Negative perception	Positive perception	
<b>Cadre in Nursing</b>	nursing officer	12	54	66
	senior nursing officer	38	56	94
	principal nursing officer	22	19	41
	Asst/chief nursing officer	5	31	36
Total		77	160	237

$$X^2 = 24.49; p = .000$$



Table 4.6 shows the cross tabulation between cadre in nursing and nurses perception of voluntary blood donation. 56 of the senior nursing officers have positive perception of VBD while 22 of the principal nursing officers have a negative perception of VBD. The cross tabulation is significant with  $X^2 = 24.49$ ;  $p = .000$

## Discussion

The result of this study revealed that majority of the respondents have positive perception on voluntary blood donation with mean and S.D of  $2.7 \pm 0.787$ . This may be as a result of high percentage of respondents' working experience, their knowledge of the implication of blood loss, and the nature of their work. Nurses are the ones who stay with patients in emergency and critical stage of their health conditions. These may have changed their perception on blood donation. Studies have shown that clinical staff knows the importance and complications of blood donation to the patients. This result agrees with the work done by Nwabueze, Nnebue, Azuiké, and Ezenyeaku, (2014) who conducted a study on the perception of blood donation among Medical and Pharmaceutical Students of Nnamdi Azikiwe University, Nnewi. The study reported a high percentage of positive perception on blood donation.

This study revealed that 15.2 % of the participants practice blood donation while 84.8 % do not practice it. This may be as a result of the age range and respondents' marital statuses, the higher percentage of the respondents were between 46-55 years. Although such age range is not a barrier as stated in a study by Duboz, Macia, and Cunéo, (2010 ) on Socio-demographic and attitudinal factors to blood donation in the urban population of Dakar, Senegal which revealed that men and individuals age 40 and over are over represented among donors during voluntary blood donation. However Ajayi (2012) pointed out that majority of nurses do not practice voluntary blood donation due to their desire for remuneration, cultural and religious misconception. Salaudeen (2011) found out that few people donate blood

voluntarily and among the few that donated blood, majority donated for friends.

From the result it was shown that greater percentage (83.5 %) of the respondents reported that not having enough blood to spare is one of the barriers to blood donation. This is supported by a study by Melku et al (2016) in a study on the Knowledge, Attitude, and Practice of Adult Population towards Blood Donation in Gondar Town, Northwest Ethiopia: A community based cross-sectional study, this revealed that the major reason mentioned for not donating blood among non-donors was perception of not being fit to donate blood (21.2%). Supporting this also is a study by Harrington (2012) which revealed that health concerns was the largest issue that needs to be addressed when developing blood drives for a sustainable blood bank supply in the future. The least percentage (3.4%) reported that blood donation is time consuming. This is in contrast with the study by Melku et al that reported that fear of health risk after donation (12.3%) was the least barrier to blood donation.

The possibility of increased blood donation among nurses does not look promising. It is apparent that nurses realize the importance of volunteering to donate blood and understand that it saves patients' lives. Barriers may continue to exist concerning family members and friends not approving of blood donation, but increased education about health and safety concerns may prove effective.

## Implication for nursing

This study reported that nursing staff in UNTH have positive perception on voluntary blood donation but have poor practice of blood donation. Their highest perceived barrier to blood donation is not having enough blood to

spare. With this report effort should be made to enlighten most nurses on how to overcome their barriers to this and partake in blood donation. Moreover practicing blood donation will be a greater help in saving life especially in emergency cases since they are usually the ones available when patients are rushed to emergency unit of the hospital. When nurses have positive perception and also practice voluntary blood donation, they stand better chance to enlighten individuals on importance of practicing blood donation. This study has shown some of the militating factors associated to blood donation, nurses should be able to do justice to them in other to improve on blood donation attitude in Enugu metropolis.

## Recommendations

Based on these results, the following recommendations are made

- Management of UNTH should organize seminars and workshops to educate the nurses on voluntary blood donation during emergency,
- Nurses should consider interest of the patients first before considering the reward that should follow up from the governments
- Additional donation centers should be created to enable the nurses and others to donate blood anytime they want.
- Nursing students should be educated on the importance of blood donation in the course of their training.
- Public awareness should be made to educate the masses on importance of blood donations and where to locate the donation centres.

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List of nurses in 26 wards where study was carried out. S/NO UNITS/WARDS TOTAL NURSES  
NURSE MANAGERS NURSING OFFICERS

S/N	Units/Ward	Total Nurses
1.	Accident/Emergency	18
2.	Children Emergency	12
3.	Ward 1	11
4.	Ward 2	13
5.	Ward 3	10
6.	Ward 4	12
7.	Eye ward	10
8.	Children ward	10
9.	New born	14
10.	Postal Natal	10
11.	Ante Natal	5
12.	Special care	8
13.	Ward 6	11
14.	Female Medical	13
15.	Male Medical	12
16.	Male Medical Extension	6
17.	Psychiatry ward	8
18.	Oncology	11
19.	Neuro/Surgical ward	12
20.	Private ward	7
21.	Ward 8	11
22.	Ward 9	11
23.	. Ward 10	8
24.	Renal ward	6
25.	Total	396