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Attitude, Beliefs and Knowledge of Patients towards Blood Transfusion Practice in Osogbo, Southwestern Nigeria

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Abstract: *Blood transfusion is a medical and life saving procedure. However, Knowledge, attitude, belief and level of awareness of blood transfusion may affect such procedure. This present study was performed to determine the attitudes, beliefs and knowledge of patients towards blood transfusion in Ladoke Akintola University of Technology Teaching Hospital, Osogbo, Osun State. Five hundred (500) patients were randomly selected and pre-test questionnaire administered. 18% had been transfused before while 82% had not been transfused. 80% of the respondents are ready to accept blood transfusion while 20% will refuse blood transfusion. 86% can encourage their relatives to accept blood transfusion while 14% will not encourage their relatives. Out of 500 participants, 190(41.3%) have adequate understanding of blood transfusion. 50% of the respondents in this study would refuse blood transfusion due to fear of infections. In conclusion, the attitude of the respondents in this study is generally satisfactory. However, knowledge regarding blood transfusion is insufficient, and the low readiness for blood transfusion is a cause for concern. Therefore, educational programs on blood transfusion should be expanded through various media such as the social media (Facebook, Twitter etc). This program should be used to spread the idea that blood transfusion does not pose significant health risks. The public should also be informed that all measures are implemented by Medical Laboratory Professionals working in the blood bank to ensure the donated blood is safe for recipients.*

Keywords: *Awareness, Attitude, Blood transfusion, Osogbo, Nigeria.*

I. Introduction

Blood transfusion is a safe medical procedure in which blood or blood parts is given to the patients intravenously (1, 2). It is very crucial for the society as it is important in saving the lives of patients with trauma/accidents, bleeding disorders, major surgeries, chemotherapy, inherited/acquired hematological diseases and malignancies (3, 4).

Blood is an essential element for human life which has no substitute hence, the theme of World Health Day in year 2000 was "Blood saves Life" (5). Early transfusions used whole blood but modern medical practice commonly uses only components of blood such as red blood cells, white blood cells, fresh frozen plasma, clotting factors and platelets (6).

Millions of lives are saved every year through blood transfusion, but the major concern especially in the developing countries is the quality and safety of blood transfusion (7). Transfusion transmissible infections such as HIV, Hepatitis B virus (HBV), Hepatitis C virus (HCV), syphilis and malaria have posed a major threat to the safety of blood with implications for the complexity and cost of provision of effective blood transfusion services (8, 9).

Blood transfusion practice varies from one facility to another depending on the available blood and blood components, the number of patients, and the support of efficient and effective laboratory services (10, 11).Various studies have shown the awareness and attitude of patient towards blood transfusion to be different among countries and traditions. Lack of awareness and attitude of patient towards blood transfusion continues to be a real threat to the procedure (12).

There is substantial evidence that the perception of the public about blood transfusion is that, it is risky (13). Although, during the last 20 years remarkable advances have been achieved in blood safety especially transfusion transmitted infections (14, 15).

The importance of blood transfusion cannot be over-emphasized; the present study was therefore conducted to determine the attitude, beliefs and knowledge about blood transfusion practice among patients

attending a tertiary health institution in Osogbo, Osun State, Nigeria. The result of the present study would enable stakeholders in blood transfusion practice to intensify their efforts in developing promotional and educational approaches to enhance the willingness of patients to accept blood transfusion when the need arises.

II. Patients And Methods

A cross-sectional study was conducted among five hundred (500) patients attending Ladoke Akintola University of Technology Teaching Hospital, Osogbo, Nigeria during a period of 2009 to 2010. The randomly selected patients for this research were between the age of 18 years and above. A pre-design, pre-test, self-administered questionnaire in English Language was used to collect the data.

The questionnaire was divided into three sections; A, B and C. Section A was used to assess the demographic and other factors such as Age, Sex, Tribe, Religion, Occupation, Marital status, Genotype and Blood group, while section B and C were used to assess the knowledge, attitudes and awareness towards blood transfusion practice respectively.

Data was processed in MS Excel and analyzed using the statistical package for the social sciences version 16.0 (SPSS inc. Chicago, IL, USA).

III. Results

Table 1 shows the socio-demographic characteristics of the study participants. Majorly, 160(32%) of the respondents were 32-65years of age. One hundred and thirty 130(26%) were between the age of 23-27 years, 120(24%) and 90(18%) were between 18-22 years and 28-32 years of age respectively. Thirty-one 31(62%) of the respondents were female while 19(38%) were male. Four hundred and sixty 460(92%) were from the Yoruba tribe, 310(62%) were Igbo, 10(2%) are Hausa and 10(2%) are from other tribes. One hundred and seventy 170(34%) were civil servant, 240(48%) were Traders/self-employed and the remaining 40(8%) respondents were students. Two hundred and thirty 230(46%) were single and 270(54%) were married.

Table 2 shows Knowledge, Beliefs, Awareness and Attitudes regarding blood transfusion. Out of 500 participants, 190(41.3%) have adequate understanding of blood transfusion. Need for blood transfusion; 60 respondents (12.2%) in case of surgery, 170(34.7%) in cases of Post-partum hemorrhage (PPH), 30(6.2%) in anemic, trauma and accident cases, and 200(40.8%) have the general knowledge of the need for blood transfusion.

Out of the 500 respondents, 100(20%) show readiness for blood transfusion and 400(80%) were not ready for blood transfusion. 400 participants refused blood transfusion due to the following reasons; 40(10.3%) said it is very dangerous, 80(20.5%) belief is a means of transfusing another person's life to the patient life, 140(35.9%) due to fear of infection, 40(10.3%) fear of death, 10(2.6%) lack of money, 50(12.8%) religion beliefs and 30(7.7%) due to ignorance. Sources of information about blood transfusion of the 500 respondents includes; 120(24.5%) from Doctor, 80(16.3%) from Nurses, 120(24.5%) from media, 120(24.5%) from other sources such as friends and family, religious houses and finally, 50(9.3%) from more than one source.

Four hundred and fifty respondents 450(90%) have the belief that blood transfusion can save lives while 50(10%) does not belief in blood transfusion as a procedure used to save lives. 170(34%) of the respondents understand the benefit of blood transfusion as a means to save many lives, 10(2%) belief that its expand life span of the people, 60(12%) its reduce mortality and 260(52%) have the general understanding of the blood transfusion.

Four hundred and seventy 470(94%) of the respondents belief that proper screening prevent transfusion transmissible infections (TTIs) while 30(6%) refuse to belief that proper screening prevent TTIs during blood transfusion. Out of 30 who refuse to belief in proper screening to prevent TTIs, 15(50%) belief that it depends on destiny and 15(50%) belief it is probability of being infected by transfused blood. Out of the 500 respondents, 110(22%) know someone who acquired TTIs through blood transfusion.

One hundred and sixty 160(32%) respondents belief that everyone who undergoes blood transfusion is likely to contact Human immunodeficiency virus (HIV) or any other TTIs. Three hundred and forty 340(65%) have the religion belief that support blood transfusion, 70(14%) have religion views that is contrary to blood transfusion and 90(18%) cannot decide.

Table 1. Socio demographic characteristics of the study participants

Characteristics	N (%)
Age(years)	
18-22	120(24)
23-27	130(26)
28-32	90(18)
33-65	160(32)
Gender	
Male	190(38)
Female	310(62)
Tribe	
Yoruba	460(92)
Igbo	20(4)
Hausa	10(2)
Others	10(2)
Religion	
Christianity	290(58)
Islam	210(42)
Occupation	
Civil Servant	170(34)
Traders/self-employer	240(48)
Student	40(8)
Marital Status	
Single	230(46)
Married	270(53)
Genotype	
AA	260(52)
AS	90(18)
SC	30(6)
AC	120(24)
Blood group	
A	160(32)
B	130(26)
AB	110(22)
O	100(20)

Table 2. Knowledge, Beliefs and Attitudes with regards to blood transfusion

Perceptions	N (%)
Definition of blood transfusion	
Introduction of blood collected from the donor to the recipient through the vein	180(39.2)
Act of restoring blood loss	30(6.5)
Process of transfusing patient with blood	60(13)
All of the above	190(41.3)
Reasons or need of patients for blood transfusion	
Surgery	
Blood loss	60(12.2)
Post-Partum Hemorrhage (PPH)	170(34.7)
Other state (Anemia, Accident, Trauma)	30(6.1)
All of the above	30(6.2)
	200(40.8)
Readiness for blood transfusion	
Yes	100(20)
No	400(80)
Reasons for refusing blood transfusion	
It is very dangerous	40(10.3)
It is a means of transfusing another person's life into the patient	80(20.5)
Fear of infection	140(35.9)
Person might want to die	40(10.3)
Lack of money	10 (2.6)
Religion beliefs	50(12.8)
Ignorance (Not enlightened)	30(7.7)
Sources of information about blood transfusion	
Doctors	
Nurses	120(24.5)
Media (Radio, TV, Newspaper etc)	80(16.3)
Others (friends, family, religious houses etc)	120(24.5)
All of the above	120(24.5)
	50(9.3)
Preferred route of transfusion	
Oral (mouth)	60(12.8)

Anal (Rectum)	30(6.4)
Intravenous (IV)	400(80)
Intramuscular (IM)	10(2.1)
Belief that blood transfusion saves lives	
Yes	450(90)
No	50(10)
Benefits of blood transfusion	
Saves many lives	170(34)
Expand life span of the people	10(2)
Reduces mortality	60(12)
All of the above	260(52)
Proper screening prevents infection in blood transfusion	
Yes	
No	470(94)
	30(6)
Beliefs that proper screening cannot prevent infection in blood transfusion	
It depends on destiny	
Probability of being infected by those blood	250(50)
	250(50)
Factors needed to be considered in screening the donor and recipient	
History	
Physical examination	70(14)
ABO group	20(4)
Rhesus type	90(18)
Presence of infectious disease	70(14)
All of the above	20(4)
	140(28)
Religious views concerning blood transfusion	
Can receive blood	340(68)
Cannot receive blood	70(14)
Neutral	90(18)
Everyone who receive blood transfusion is likely to have HIV or any other infections	
Yes	160(32)
No	340(68)
Do you know somebody who acquired infection through blood transfusion?	
Yes	110(22)
No	390(78)
Have you been transfused before?	
Yes	90(18)
No	410(82)
Can you accept blood transfusion?	
Yes	320(64)
No	180(36)
Cannot accept blood transfusion	
Due to religious belief	250(50)
Fear of infection	250(50)
Can you encourage your family member to be transfused?	
Yes	
No	430(86)
	80(14)

IV. Discussion

Blood transfusion is a highly effective medical procedure which is a potentially life-saving treatment for many patients and one of the major components of the modern health care system (16). The present study was conducted to determine the attitude, beliefs and knowledge about blood transfusion practice among patients attending a tertiary health institution in Osogbo, Nigeria in order to enable stakeholders in healthcare practice to understand the challenges facing health workers when need arises to transfuse patients in need of blood and to develop strategies to remedies the challenges.

This study shows that minority of the respondents (18%) have undergone blood transfusion while the majority (82%) have never being transfused. In addition, 80% doesn't show readiness for blood transfusion for reasons stated that the procedure is very dangerous, fear of infection, fear of death, lack of money, religion beliefs and ignorance. This is in tandem with a previous study conducted by Abdul-majeed in Saudi Arabia (11).

It has been reported that age, tribe and gender are important determinants in those willing to undergo blood donation and transfusion (17-19). This study also shows that respondents were more likely to be females (62%) than males (38%). In addition, 82% of the respondents were between 33-65 years of age.

In a similar study conducted among Saudi population, it was revealed that 20% of Saudis would refuse blood transfusion even if they are in need, because of the risk of acquiring an infectious disease. Furthermore, 11.6% claimed that they or a family member acquired infectious diseases including hepatitis and acquired immune deficiency disease (AIDS) following blood transfusion (11). Sixty-eight percent (68%) of the respondents in this current study believe that everyone who receives blood is likely to have HIV or any TTIs. In addition, 22% of the respondents in this current study stated that they know someone who acquired infections through blood transfusion. Thus, the risks of transmitting blood-borne infections remain a major source of worry to blood recipients.

In this study, majority of the participants acquired information about blood transfusion from Doctors (24.5%), Nurses (16.3%) and the media (24.5%). This is similar to the study conducted by Maqbool et al who reported that the major sources of information to the public about blood transfusion are the hospital staff and friends (20). Therefore, efforts should be intensified in order to increase the number of educational programs on blood transfusion and such program should be transmitted through various media including the internet.

The prevalence rate of transfusion transmissible infection in Nigeria is increasing alarming. Adeniyi et al reported a prevalence rate of 11.4% for Hepatitis B virus among intending blood donor (21). In a similar study conducted by Shittu et al, prevalence rate of 9.9% was reported for both Hepatitis infections (HBV and HCV) among intending blood donor in Akure, Nigeria (22). It is noteworthy that 50% of respondent in this study would refuse blood transfusion due to fear of infections.

In conclusion, the attitude of the respondents in this study is generally satisfactory. However, knowledge regarding blood transfusion is insufficient, and the low readiness for blood transfusion is a cause for concern. Therefore, educational programs on blood transfusion should be expanded through various media such as the social media (Facebook, Twitter etc). This program should be used to spread the idea that blood transfusion does not pose significant health risks. The public should also be informed that all measures are implemented by Medical Laboratory Professionals working in the blood bank to ensure the donated blood is safe for recipients.

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