

## AWARENESS AND WILLINGNESS REGARDING ORGAN DONATION AMONG UNDERGRADUATE STUDENTS IN AHMADU BELLO UNIVERSITY ZARIA

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### ABSTRACT

**Background:** With the rising incidence of chronic disease conditions such as diabetes mellitus and hypertension, the world is experiencing a rapid surge in the incidence of end stage organ failures (ESOF) but organ transplantation remain the best hope for the patients, there has always been a long standing shortage of organ donors.

**Aim:** This study was conducted to assess undergraduate students' awareness and willingness to donate an organ at a selected university in northern Nigeria.

**Methods:** Descriptive cross-sectional research design was adopted and disproportionate stratified sampling technique was used to select 400 undergraduate students from Faculty of life sciences and College of health sciences of Ahmadu Bello University (ABU), Zaria, Nigeria where a structured questionnaire was used as instrument for data collection.

**Results:** It was found that, majority of the respondents (89.8%) had adequate level of awareness regarding organ donation. For living organ donation, 64% were willing to donate while they are still alive out of which 91% were only willing to donate to their family members while for cadaveric organ donation, only 43.5% of the respondents were willing to donate organs after their death and majority of them (64.2%) can only donate to their family members. The study further discovered that the factors affecting undergraduate students' willingness to donate organs were fear that their organs would be misused or abused as submitted by 72.5% of respondents, 49.8% identified the fact that there was some form of risk involved in donating an organ while 28% believed that their body should be kept intact after death.

**Conclusion:** The level of awareness regarding organ donation and willingness to donate an organ among undergraduate students were generally good but there is need for further intensive awareness campaigns targeting the myths surrounding organ donation to encourage students donate their organs.

**Keywords:** Organ, donation, transplant, awareness, willingness, undergraduates.

### INTRODUCTION:

With the rising incidence of chronic diseases such as hypertension, diabetes and chronic nephritis, end-stage organ diseases (ESOD) keeps rising as well increasing demand for organ donation at a time when the world is experiencing chronic shortage of organ donors. Global Observatory had recorded organ/tissues donation and transplantation activities in most (57%) of the WHO's Member States but only over a third (36%) reported deceased donor transplantation activity showing the global dearth of

deceased organ donation; and generally, 62% of all donation and transplantation activities take place in high income countries, 28%, 9% and less than 1% in upper-middle, lower-middle and low-income countries respectively (Sarah et al. 2014).

World over, Spain was ranked for 24 years running as the country with the highest rate of annual organ donation at 32/million population and in 2015 alone, there were 39.7 donors per million, 4,769 transplants in the country (Simar, 2017). In Nigeria, the largest African economy and

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the most populous African Nation where it was reported that currently, 25 million people are living with end stage renal disease (Franka, 2018) in addition to other ESOD, between the year 2000 and 2016, just a little over 200 transplants were performed in the country with the organs harvested from living donorsexclusively (Ifeoma and Chinwuba, 2016).

Organ transplantation in Nigeria just like in other countries of the world is bedeviled by myriad of factors among which the most prominent is shortage of donors which is in addition to high cost of treatment in the country and the limited number of facilities conducting transplant activities as only about 10 facilities are currently offering organ/tissue transplantation in Nigeria. Out of these 8 offer kidney transplants, 2 centers offer corneal transplant, and 1 center is offering bone marrow transplants, servicing a population of 180 million. This situation pushes Nigerians in need of organ transplantation to travel out of the country for the treatment (Ifeoma and Chinwuba, 2016).

Realizing the burden of ESOD resulting from the high burden of chronic diseases like diabetes, hypertension in the population and the fact that only a transplant can provide a genuine hope for life to those with ESOD, several countries of the world made many legislative and policy attempts to combat the chronic shortage of organs and donors. Until the year 2014, Chinese laws permitted the harvesting of organs from executed prisoners without prior consent from them or their families to the point in December 2005, the country's deputy health minister estimated that as many as 95 per cent of the organs used in China's transplants came from such sources; Iran is the only country in the world where it is legal to buy a kidney; Spain and India consider all citizens as potential donors unless they specifically choose to opt-out with the deceased' next of kin as final authority over the matter (Simar, 2017). However, the only attempt by the Nigerian Government was in the year 2014 when the national health policy was

approved which provide guidelines for organ donation in the country and many believed that, the policy has not made any serious attempt to solve the problem of acute organ shortage in the country with the inclusions that minors are not eligible to donate organs/tissues and organ donation being voluntary among the most discussed issues which keep prompting experts to suggest other ways they deem legal and ethically permissible to help increase the rate of organ donation in the country. Recently, there was a submission from a Nigerian based legal practitioner that convicts already condemned to face death but who are willing to donate their organs to save others should have their sentences commuted to life in jail amongst many other expert opinions but organ donation still remains voluntary in the country and there is no reported case of deceased donation yet (Ajiboye, 2015; Ifeoma and Chinwuba, 2016).

Generally, organ donation in Africa is still viewed as a taboo and has been most difficult with deceased donations and even the little living donations are mostly shared between family members (Anne, 2015) which explains why in the African region, apart from in South Africa, annual organ donation rate both for living and cadaveric donation ranges between 0–4 per million populations (European commission, 2014).

As stated by Ifeoma and Chinwuba, (2016), live organ donations are generally accepted by most ethnic and religious groups in Nigeria, although some sociocultural issues are of relevance but as encountered in most African societies and cultures, in Nigeria, the dead body is venerated by most cultures and it is with this background that people object to deceased organ donation as the procurement process may be viewed as a denigration of the dead.

According to Odusanya and Ladipo. (2006), in a study conducted among people living in Lagos, 60% of the respondents were aware of organ donation but only 30% were willing to donate their organs and willingness to donate organ shows association with younger age but not with gender and level of education.

From a study by Ibrahim *et al.* (2018) conducted among basic Nursing and Midwifery Students of a selected college in Northern Nigeria, where 58.5% of the students showed adequate level of awareness regarding organ donation; 80.5% submitted that they were willing to donate their organs if the need arises; lack of familial ties with the recipient, cultural and religious beliefs, fear of having a disfigured body were identified as the factors obstructing willingness to donate an organ (living organ donation) while, a cultural belief that the body should be kept intact even after death was found to be obstructing cadaveric donation among the respondents. Similarly, in another study among students in a Syrian medical school, it was found that 72.1% were willing to donate their organs (Seo *et al.*, 2016). A study done among relatives of patients awaiting treatment in University Malaya Medical Centre (UMMC), Malaysia has shown a host of reasons behind negative attitude towards organ donation such as fears of organs being used for research, religious-cultural factors, and fear of less active treatment if the patient is known to be a donor (Lochet *al.* 2013). Another study has shown a low education level, low household income and age group are also important

aspects associated with not pledging as an organ donor (Riyantiet *al.*, 2014).

Other factors identified as influencing organ donation include lack of awareness, knowledge and willingness among public, especially students (Seo *et al.*, 2016) and passivity among health professionals in approaching families of potential donors (Satyapal, 2005) which further informed the need for this study to examine the awareness and willingness to donate an organ among university students in Northern Nigeria whom currently there is paucity of literature on them in the country.

## MATERIALS AND METHODS

The study was conducted at Ahmadu Bello University, Zaria and cross-sectional descriptive research designed was adopted. Disproportionate Stratified sampling technique was employed to select a sample of 400 undergraduate students from Faculty of Life sciences and College of health sciences of Ahmadu Bello University (ABU), Zaria, Nigeria. A pretested structured questionnaire was used as instrument for data collection where 372 (93%) respondents successfully filled and returned their questionnaires. Data was analyzed using descriptive statistical methods

## RESULTS:

### SOCIODEMOGRAPHIC DATA OF RESPONDENTS

Table 1: Distribution of Respondents by Socio-demographic characteristics.

(n=372)

Variable	Frequency	%
<b>Age</b>		
16-20	142	38.2
21-25	210	56.5
26-30	16	4.3
31-35	4	1.1
<b>Gender</b>		
Male	192	51.6
Female	180	48.4
<b>Religion</b>		
Christianity	78	21.0
Islam	29	79.0
<b>Ethnic group</b>		
Igbo	20	5.4%
Hausa	214	57.5%
Yoruba	40	10.8%
Others	98	26.3%
<b>Faculty/College</b>		
Life sciences	174	46.8%
College of Health Sciences	198	53.2%

### *Awareness And Willingness Regarding Organ*

As depicted in Table 1, 56.5% were between the age of 21-25, 38.2% in the age bracket of 16-20 years; 51.6% were males and 48.4 were females, 79% were Muslims, 57.5%

were Hausa and 10.8% were Yorubas by ethnic extraction and 53.2% were students of College of Health Sciences while 46.8% were from faculty of Life Sciences.

Table 2: Awareness towards organ donation

<b>Response</b>	<b>Frequency</b>	<b>%</b>
Aware	334	89.8
Not aware	38	10.2
<b>Total</b>	<b>372</b>	<b>100.0</b>

As shown in Table 2, 89.8% of the respondents demonstrated awareness towards organ donation.

Table 3: Willingness to donate and organ

<b>Living Donation</b>			<b>Cadaveric Donation</b>		
<b>Response</b>	<b>Frequency</b>	<b>%</b>	<b>Recipient</b>	<b>Frequency</b>	<b>%</b>
Yes	238	64	Yes	162	43.5
No	134	36	No	210	56.5
<b>Total</b>	<b>372</b>	<b>100.0</b>	<b>Total</b>	<b>372</b>	<b>100.0</b>

From Table 3, 64% of respondents were willing to be living organ donors and 43.5% submitted that they were willing to donate their organs after death.

Table 4: Distribution of respondents based on their Preferred organ recipients

<b>Living organ donation</b>			<b>Cadaveric organ donation</b>		
<b>Preferred Recipients</b>	<b>Frequency</b>	<b>%</b>	<b>Preferred Recipients</b>	<b>Frequency</b>	<b>%</b>
Family Member	217	<b>91</b>	Family Member	104	<b>64.2</b>
Friend	09	3.8	Friend	06	3.8
Any one that needs an organ	12	5.2	Any one that needs an organ	52	<b>32</b>

As shown in Table 4, for living organ donation, most of the respondents (91%) chose family members as their preferred organ recipients which was selected by 64.2% of the respondents who agreed to

donate their organs after death. A larger proportion (32%) of the respondents submitted that they could donate their organs after death to anyone who needs an organ compared to 5.2% for living organ donors.

Table 5: Factors affecting willingness to donate an organ

Factor	Mean Score
1. Organ donation is unacceptable because of religious beliefs	2.6
2. The body should be kept intact after death	3.4
3. There is danger that donated organs could be misused or abused	3.9
4. Donating an organ can cause a harmful effect or complication to you	3.6
5. The body will be disfigured if you donate an organ	2.7
6. Your family members will object if you were to donate an organ	2.1
<b>Average Mean</b>	<b>3.05</b>

For factors affecting willingness to donate an organ (Table 5), the respondents submitted that the belief that the body should be kept intact after death (mean score 3.4), the fear that donated organs could be misused or abused by facilities and health care providers (mean score 3.9) as well as, the feeling that donating an organ can cause a harmful effect or complication to the living donor (mean score 3.6) influence their willingness.

## DISCUSSION

Majority of the respondents demonstrated awareness towards organ donation which can be attributed to the fact that mass campaigns embarked upon by many organizations on the social media and across campuses in Nigeria. This finding is higher than that found by Ibrahim, *et al.* (2018), in a study conducted among basic Nursing and Midwifery Students of a selected college in Northern Nigeria where 58.5% showed adequate level of awareness; the findings further support those from various other studies such as that conducted by Marques-Lespier *et al.* (2013); Sucharita *et al.* (2013) and Kaishtha *et al.* (2016) conducted in different parts of the world that revealed awareness levels as 72.0%, 97.0% and 73.3% respectively. However, the findings oppose those of studies such as that of Satish *et al.* (2013) in India and Alsaied *et al.* (2012) in Qatar which found out level of knowledge/awareness towards organ donation as low and below 50% in their study population.

More than half of the respondents were willing to be living organ donors while 43% were willing to be cadaveric organ donors after death. Although the proportion willing

to donate their organs at times of need is reasonably high but it is still less than that of those that demonstrated having awareness on organ donation which can be connected to cultural practices and superstitions that are commonly associated to organ donation. Meanwhile, the findings are higher than the findings advanced by to Odusanya and Ladipo (2006), from a study conducted among people living in Lagos where only 30% of the respondents submitted that they were willing to donate their organs and many other studies such as that by Nisreen *et al.*, (2013) conducted among Pakistan medical students where 44.9% demonstrated willingness to donate their organs and another survey done in Nigerian by Eziyi *et al.*, (2014) in a Nigerian medical school where only 14.7% consider donating an organ. For living organ donation, the findings are slightly lower than those found in some studies conducted high income countries like that conducted by Marta *et al.*, (2013) among Polish nurses where 73% gave a positive response towards donating their organs which is not unexpected as the World Health Organization identified the high income countries as the states where 62% of all donation and transplantation activities across the world take place (Sarah *et al.*, 2014).

For factors affecting willingness to donate an organ, the respondents submitted that the belief that the body should be kept intact after death (mean score 3.4), the fear that donated organs could be misused or abused by facilities and health care providers (mean score 3.9) as well as, the feeling that donating an organ can cause a harmful effect or complication to the living donor (mean score 3.6) influence their willingness.

These findings support those from a study conducted to examine awareness and willingness to donate an organ among basic Nursing and Midwifery students of a selected college in Northern Nigeria (Ibrahim,*et al.*, 2018). These findings show the need for organize efforts for further enlightenment in spite of the fact that 89.8% of the respondents demonstrated having awareness towards organ donation as these factors are among the myth blocking people from donating their organs across various parts of the world as identified by Mayo Clinic (2017).

## CONCLUSION AND RECOMMENDATION

The level of awareness regarding organ donation and willingness to donate an organ among undergraduate students were generally good but there is need for further intensive awareness campaigns targeting the

myths surrounding organ donation to encourage students donate their organs, to move from being willing to actually donating their organs as the study uncovered that willing students were still struggling with misinformation based on the factors they identified as influencing their decisions to donate. It was further recommended that, the public and private sectors of the economy should work toward the establishment of more transplant facilities and organ banks across the country for the people living with ESOE to harvest the best of benefits from the people willing to donate organs.

## CONFLICT OF INTEREST

The authors hereby submit that there was no conflict of interest at any point from the conceptualization, conduct of the study to the dissemination of the findings.

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