

KNOWLEDGE, ATTITUDE AND PRACTICE on blood donation among nurses in Komfo Anokye Teaching Hospital, Kumasi

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ABSTRACT

BACKGROUND

There is some evidence to suggest that the greater one's knowledge in the blood donation process and the need to donate blood, the more likely one would donate blood. Generally, the lack of knowledge among participants in most studies on blood donation issues seems to be a major concern. There is a perception that among health professionals, nurses are in the group that donate fewer units of blood on yearly basis and this has been blamed on several factors that have not been scientifically verified.

OBJECTIVES

The objectives of the study were to determine the knowledge, attitudes and practices regarding blood donation among Nurses in Komfo Anokye Teaching Hospital (KATH); and to identify the factors that prevent nurses from donating blood.

METHODOLOGY

A cross-sectional study was conducted which made use of a close-ended questionnaire to ascertain the knowledge, attitude and practices of nurses in eight clinical directorates at KATH. The data obtained were entered into a database which was designed using EpiData v3.1. The data were then analysed using StataIC 12.

RESULTS

170 nurses took part in the study. Females formed 85.3% of the respondents and the rest were males. The Regular voluntary non-remunerated donor was affirmed as having the highest chance of donating safe blood. The most frequently mentioned importance of blood donation was to save lives (87%). Out of the 27.1% of the respondents who have donated blood before, only 1.6% were regular donors. The results showed that the nurses had limited knowledge about blood donation, but a rather positive attitude towards blood donation. There was however poor practice of actual blood donation among the nurses.

CONCLUSION

The knowledge and practice of blood donation among the nurses in KATH are limited. There is need for more specific training of nurses and other health workers on blood donation.

INTRODUCTION

Voluntary non-remunerated donors account for only 41% of the total blood donations in Ghana.¹ The demand for whole blood and blood products is increasing at a rate higher than the collection rate.² It is known that more than 75% of blood in the rural areas and 50% in urban areas in Ghana is transfused to children under five years and women of child-bearing age.¹ People have different reasons why they donate blood. Whilst some think it is their religious and moral duty others think it is good for their health.^{3,4} In Ghana, most people donate blood because a relative or friend is in need of it.¹ Response to blood donation campaign largely depends on the level of education, knowledge, and attitudes of individuals and groups targeted. Generally, the lack of knowledge among participants in most studies on blood donation issues seems to be a major concern. This could not only be seen in students and teachers,⁵ army personnel⁷ and the general public who are frequent donors, but also in health personnel.⁸ However, in contrast to these findings, a study among medical personnel showed an increase in knowledge on blood and blood donation issues among them but this did not translate to the increase in the number of voluntary blood donations by the medical personnel.⁸ In a study involving health science students including nurses, the overall knowledge on blood donation was good, but majority of the students never donated blood.⁹ It is known that 60.2% of clinical personnel in Ghana are nurses.¹⁰ There is a perception that among health professionals nurses are in the group that donate fewer units of blood on yearly basis and this has been blamed on several factors that have not been scientifically verified. The objectives of the study were to determine the knowledge, attitudes and practice regarding blood donation among nurses in a tertiary hospital in Ghana; and to identify the factors that prevent nurses from donating blood.

MATERIALS AND METHODS

The study was conducted at Komfo Anokye Teaching Hospital. The one thousand five hundred (1500) bed capacity hospital receives referrals from all district and private hospitals in the Ashanti region, as well as hospitals from other regions and neighbouring countries. The staff strength of the hospital stands at 3472 and nurses make up about 36.5% of the total staff population. A cross-sectional study was conducted. Participants completed a self-administered questionnaire to assess their Knowledge, Attitude and Practice about blood donation. Stratified sampling method was used to group the nurses. The sample size for the cross sectional study was calculated using a confidence level of 95% and margin of error of 7%. The sample size required for the study was 170.¹¹ Nurses including midwives and other specialist nurses who work in the Komfo Anokye Teaching Hospital were recruited for the study after consent was obtained from the hospital. Only nurses who consented were admitted to the study. A structured close-ended questionnaire assessing the knowledge, attitude and practice of the nurses was used to collect the data. The questionnaire was adopted from the Pan American Health Organization's (PAHO) Methodological guidelines for socio-cultural studies on issues related to blood donation¹² and modified to suit the study. This was first pre-tested with twenty (20) nurses to ensure that the questions were clear and provided the relevant information that was needed to achieve the desired results in the study. The necessary changes and adjustments were made, after which the final questionnaire was administered to the nurses who met the inclusion criteria. The questionnaire also included the demographic data of the participants. The data obtained were used for the purposes of this study only. The names of participants were not required in the questionnaire for confidentiality reasons.

Ethical clearance was obtained from the ethical review committee of Kwame Nkrumah University of Science and Technology and KATH.

RESULTS

Data collected were entered into database which was designed using EpiData 3.1 software. StatalC 12 software was used in analysing the data to extract the desired informations. The results obtained were also presented in Tables. Percentages were used for descriptive parameters.

• Demographics of Respondents

A total of 170 nursing staff took part in the study between April 2012 and July 2012. The mean age of the respondents was 29.63 (SD: 8.32) years. Females (85.3%) formed majority of the respondents while the males (14.7%) formed the minority. Nurses from eight clinical directorates responded to the questionnaire. The directorates were Accident and Emergency (A & E), Anaesthesia, Dental Eye Ear Nose and Throat (DEENT), Medicine, Obstetrics and Gynaecology (O & G), Child Health, Surgery and Polyclinic. 93.5% of the respondents knew their blood groups whilst 6.5% did not know. For those who knew their blood groups, O+ blood group was the highest among the participants. This was followed by B+ (20.1%), A+ (18.9%), O- (7.6%), AB+ (5%), B- (3%) and A- (0.6%) respectively. Table 1 shows the demographics of participants.

• Knowledge of Nurses on Blood Donation

The greatest chance of donating safe blood was thought by the nurses to be by regular voluntary non-remunerated donors (45.3%), Professional donors (21.2%), Family replacement donors (20%) and Commercial donors (12.9%). Table 2 shows other responses from participants on their knowledge concerning blood donation.

• Attitude of Nurses towards Blood Donation

A total of 131 nurses gave responses of their opinion on the importance of blood donation. The most frequently mentioned importance of blood donation was, to save lives 114 (87%) in such conditions as excessive bleeding in childbirth and trauma, severe anaemia, and other emergencies. Other reasons given for blood donation were, to get blood test 9 (6.9%), and to replenish one's blood 7 (5.4%). Other importance also mentioned was, to stock the blood bank, and to serve as a surety for the donor. One respondent (0.85) did not think blood donation was important. The responses on incentives for blood donation, and the factors influencing and encouraging peoples' willingness to donate blood are presented in a table.

• Nurses' Practice on Blood Donation

Of the respondents, only 27.1% have ever donated blood. Moreover, the last time the donors donated blood was 1-3 months (20%), 1-3 years (55.6%), 4-6 years (13.3%), and 8-10 years (11.1%). Thus it can be seen that 1.6% of the respondents donate blood regularly, 7.7% occasionally and 19.1% seldomly. Majority of donors (67.4%) were motivated to donate blood by blood bank staff, while 28.3% was by friends or relatives, and 4.4% by radio/television. The reasons given by the donors for donating blood were to save lives 84.8%, to get a blood test 13.0% and for other reasons, 2.2%. Blood was donated by 37.2% of the donors in the hospital whilst 58.1% donated during a mobile collection. The rest (4.7%) did not state where they donated blood.

Of the 72.9% who have never donated blood, the reasons given for non-donation are presented in *table 4*. Major among them is "No one has ever asked me to donate"

DISCUSSION

Studies on the knowledge, attitude and practice on blood donation among nurses are limited. The results from this study showed that all the respondents were potential donors since their age range (21 - 56 years) was within the range of eligibility for blood donation. Though the age range varies with each country.¹³ according to the National Blood Service, Ghana, the minimum age for donors should be 17 years.¹⁴ Females dominate their male counterparts in terms of numbers, in the nursing profession.¹⁵ However, the male donors were more than the female donors; thus confirming that males generally donate more than females.^{4, 16, 17} Majority of the nurses (93.5%) knew their blood groups and blood group O (Rh) positive was the commonest (44.7%) among the blood groups. Some studies have also found blood group O (Rh) positive as being the commonest blood group.¹⁸

Regular voluntary non- remunerated donors are the most preferred since they are known to be most likely to donate safe blood.¹⁹ However, a fifth of our respondents thought other donors like the family replacement donor would rather be preferred. This may suggest why some nurses may prefer to donate for their relatives when they are in need, rather than donate voluntarily. Generally, the nurses showed good knowledge on the risk factors that can affect the safety of blood transfusion as well as the contraindications for blood donation. One's blood being replenished after donation seemed to be an importance of blood donation by a very small proportion of the nurses;(5.4%) but a report showed that this was actually one of the major benefits of blood donation.²⁰ Moreover, only one-sixth of nurses could actually state the age range for donors. Again, less than half could also give the right minimum body weight for donors and the inter-donation interval. It can therefore be stated that, the nurses have limited knowledge on blood donation, though it was expected that their background in health knowledge should have translated into better knowledge in blood donation. Several incentives for voluntary blood donation have been evaluated in other studies. Issuance of Blood Donor Certificate was seen as the most appropriate incentive for voluntary donation in this study. 10.6% of the respondents required money as an appropriate incentive. However, in most researches majority of respondents do not agree to money as an appropriate incentive for donors.²¹ One-tenth of nurses thought an extra day off from work would be an appropriate incentive. A larger proportion of nurses stated that saving lives was the major importance of blood donation. A study conducted at King Hussein Medical Centre, in Jordan also showed a higher percentage of participants asserting to the fact that saving lives was the major importance of blood donation.²² On the other hand others thought getting blood test (6.9%) and replenishing one's blood (5.4%) was more important. According to the South African National Blood Service,²³ getting blood test was one of the reasons why people donate blood. However, 0.8% of the nurses thought blood donation is not important. Furthermore, almost all the nurses were willing to donate blood for someone in case of emergency as well as encourage people to donate blood. A study in India also showed a positive attitude towards blood donation among health science students.⁹ In general, it could be stated that the attitude of nurses towards blood donation was good since a larger percentage of them gave positive responses on their attitude towards donation. Only 27.1% of the nurses have ever donated blood. Studies from some countries found that only a few health workers were donors.^{24, 25} This suggests that health workers form a small percentage of blood donors in many

populations. Among those who have donated, majority (48%) have donated blood only once, whilst very few (6.5%) have donated blood up to four times. Similar result was seen in a community survey in northern Nigeria where 43.4% of the public had donated blood once and 9% have donated four times.²⁶ It is therefore not a surprise that only 1.8% of our nurses donate blood regularly. A study conducted among doctors and paramedics also showed them to be only 3.4% of regular donors.⁸ However, majority of nurses who donated blood did so for altruistic reasons- which is the most preferred reason for donating blood.²⁷ Blood bank staff were a major motivator for blood donation, while mobile collection (58.1%) was, ironically, the place where most nurses donated blood, in contrast to the hospital blood bank, where only 37.2% of donated blood. This could mean that most nurses actually join the public during mobile collections or whilst they were in school, church or other programmes. The main reason for non-donors was 'no one has ever asked me to donate' (33.6%). A study conducted by Maqbool *et al*,⁴ showed a similar reason why people do not donate. Other reasons (19.20%) such as low blood pressure, low body weight, nursing mother, diseases (such as fibroid, skin diseases etc.) were also mentioned.

CONCLUSION AND RECOMMENDATIONS

The knowledge on blood donation among the nurses in KATH is limited. Nurses must not be presumed to have good knowledge of blood donation, and there is the need to educate nurses and other health professionals on issues specifically relating to blood donation. While the attitude of the nurses towards blood donation appeared positive, there was disconnect between attitude and practice, as nurses were not frequent blood donors. The positive attitude, probably based on clinical experiences, must be worked upon to translate to actual practice. This requires training programmes targeted at nurses and other health workers, and feedback from such programmes could be used to develop better strategies for recruiting and retaining them as regular blood donors.

Table 1: Demographics of Study participants

Variable	N=170	Percentage (%)
Age mean (SD)	29.63 (8.32) years	N/A
Gender		
Male	25	14.7
Female	145	85.3
Marital status		
Single	105	61.8
Married	65	38.2
Knowledge on blood group		
Yes	159	93.5
No	11	6.5

Table 2: Knowledge of nurses concerning blood donation

Variable	Response (n)	Percentage (%)
Benefit of donating blood		
One's blood is replenished after donation	97	57.1
Low weight and appetite	0	0
None of the above	67	39.4
No response	6	3.5
Age range of blood donors (Years)		
18 and above	38	22.4
18-45	35	20.6
13-55	5	2.9
17-60	25	14.7
Don't know	59	34.7
No Response	8	4.7
Minimum weight of blood donors (Kg)		
Less than 50	24	14.1
50-60	77	45.3
61-70	5	2.9
Greater than 70	2	1.2
Don't know	54	31.8
No Response	8	4.7
Quantity of blood taken for each donation		
<500ml	117	68.8
650ml	9	5.3
1000ml	8	4.7
Don't know	36	21.2

Table 3: Attitude of nurses on blood donation

Variable	Response (n)	Percentage (%)
Incentive for voluntary donation		
Money	18	10.6
Extra off day from work	16	9.4
Blood donor certificates	108	63.5
Nothing	12	7.1
Others	14	8.2
No response	2	1.2
Willingness to donate blood		
Yes	153	90
No	17	10
Encouraging someone to donate		
Yes	155	91.2
No	14	8.2
No response	1	0.6

Table 4: Practice of nurses on blood donation

Variable	Response (n)	Percentage
History of Blood Donation		
Yes	46	27.1
No	124	72.9
Number of blood donations		
Once	22	48
Twice	15	32.6
Three times	6	13
Four times	3	6.5
Reason for Donation		
Save lives/ voluntary	39	84.8
Get blood test	6	13.0
Other	1	2.2
Why participants do not donate blood		
Fear of needles	15	12
Not interested	35	28
No one has asked	41	33.6
Fear of disease transmission	4	3.2
Fear of blood tests	3	2.4
Others	24	19.2
No response	2	1.6

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