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## AWARENESS AND ATTITUDE REGARDING BLOOD DONATION AMONG PEOPLE RESIDING IN KALIKA MUNICIPALITY, CHITWAN

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### ABSTRACT

Blood donation refers to the process of collecting, testing, preparing, and storing blood and blood components. The objective of this study is to find out the awareness and attitude regarding blood donation. A descriptive cross sectional study design was used with 153 people residing in Kalika Municipality, Chitwan by using probability, systematic random sampling technique. Data was collected by using structured interview schedule. Data was analyzed through descriptive and inferential statistics. The study finding revealed that more than half (54.90%) of the respondent had adequate level of awareness and nearly half (49.67%) of the respondent had positive attitude. The significant influencing variable for the level of awareness religion was ( $p=0.003$ ) and history of blood donation ( $p=0.04$ ). The significant influencing variable for the level of attitude was age ( $p=0.04$ ). There was statistically significant low degree positive correlation between awareness score and attitude score ( $r=0.187$ ,  $p=0.021$ ) of the respondents. It is concluded that majority of respondents have inadequate level of attitude regarding blood donation. Therefore, awareness upgrading program should be conducted through mass media, community education and trainings.

**KEYWORDS:** Awareness, Attitude, Blood donation, People.

### INTRODUCTION

Blood is the fluid that circulates in the heart, arteries, capillaries, and veins of a vertebrate animal carrying nourishment and oxygen to and bringing away waste products from all parts of the body (Merriam-Webster, 2017).

Blood donation refers to the process of collecting, testing, preparing, and storing blood and blood components. Blood is made up of three different life saving components which include plasma, platelets, and red blood cells (Karim, Alam, Farazi, & Labone, 2012).

Large volume of blood could be lost as a result of numerous varying serious conditions such as road traffic accidents, obstetric and gynecological hemorrhages, surgery, trauma, chemotherapy, and long-term therapies as well as anemia of medical or hematologic conditions or cancer. Because of these blood transfusion is considered as an integral and essential element of a health care system (Amatya, 2013).

About 234 million major operations are performed worldwide every year; 63 million people undergo surgery for traumatic injuries, 31 million for treating cancers, and another 10 million for pregnancy-related complications. For all of these procedures, blood

transfusion is mandatory {International Federation of Red Cross and Crescent Societies (IFRC), 2013}.

Donating blood is an act that saves millions of lives worldwide that it is an essential element of human life and there is no substitute to it. The World Health Organization (WHO) estimates that blood donation by 1% of the population is generally the minimum needed to meet a nation's most basic blood requirements (Fordham & Dhingra, 2010).

Many people in developing countries are faced with ignorance, misperceptions and fears about the blood donation process, which result in a limited number of voluntary donors. Lack of knowledge, fear, facilities, convenience and the quality of service are common factors in people's decisions on whether to donate blood repeatedly on a voluntary basis. Indeed, understanding blood donor's motivations is crucial to improve the effectiveness of donor recruitment and retention programs (Mamabolo, 2012).

Barriers to maintenance of adequate and safe blood supply in developing countries exist at all levels. These include infrastructure challenges such as problems with refrigeration and electricity needed to store donated blood, low funding for purchase of blood-banking equipments and test kits are inadequate. These barriers/challenges are obvious in countries with extreme poverty, political instability, and armed conflict {United

State Agency for International Development (USAID), 2006}.

Urgesal, Hassen, and Seyoum (2017) conducted community based cross sectional study regarding knowledge, attitude, and practice regarding voluntary blood donation among adult residents of Harar town, Eastern Ethiopia revealed that among 845 study participants, less than half 43.5% participants had adequate knowledge and only 278 (32.9%) study participants had positive attitude toward voluntary blood donation.

## MATERIALS AND METHODS

A descriptive, cross-sectional research design was used to find out the level of awareness and attitude regarding blood donation among people residing in Kalika Municipality, Chitwan. The population of the study was community people of Kalika Municipality-2, Chitwan. Probability, Systematic Random Sampling technique was used to select the sample with  $K^{\text{th}}$  interval 6. Total population of this study was 153.

The instrument for data collection was structured interview schedule through face to face interview method which was developed by the researcher herself reviewing the related literature and consulting with research advisor and subject expert. Reliability of research instrument of awareness was tested by using item analysis (74%) and attitude was tested by using Cronbach's Alpha (0.71). The research instrument was translated into Nepali language to make it more clear and easy for taking

information from the respondents. Pre-test was done among 10% of total sample in a similar setting. Data was collected by researcher herself during the period of 28-08-2017 to 10-09-2017.

Ethical approval was obtained from CMC- Institutional Review Committee (IRC), Bharatpur, Chitwan and research proposal approval was obtained from Nursing (Research) Thesis Committee of School of Nursing, Chitwan Medical College. Administrative permission for data collection was obtained from the Kalika Municipality Ward Office, Chitwan. Informed consent was obtained from all respondents prior to the data collection. Privacy was maintained by using code number for each respondent. Confidentiality of the information of the respondents was maintained by not disclosing the information and by using only for the study purpose. Respondents dignity was maintained by giving right to reject or discontinue from the research study at any time.

All collected data was checked, reviewed and organized for its accuracy, completeness, and consistency. All collected data was analyzed by using IBM Statistical Package for Social Science (SPSS) version 20.0. All collected data was analyzed and interpreted in terms of descriptive statistics (frequency, median, mean, percentage and standard deviation) and inferential statistics (chi-square and Pearson correlation) was used according to data.

**Table 1: Respondents' Socio-demographic Characteristics.**

Variables	Frequency	Percentage
<b>n=153</b>		
<b>Age groups (in completed years)</b>		
20-25	64	41.84
26-30	27	17.65
31-35	27	17.65
36-40	35	22.86
<i>Mean <math>\pm</math> SD (age) = 28.65<math>\pm</math>6.91, Min= 20 yrs ;Max= 40 yrs</i>		
<b>Sex</b>		
Male	84	54.9
Female	69	45.1
<b>Religion</b>		
Hindu	113	73.85
Buddhist	33	21.57
Christian	7	4.58
<b>Ethnicity</b>		
Dalit	7	4.58
Disadvantaged janajati	41	26.8
Relatively advantaged janajati	22	14.38
Upper caste group	83	54.26
<b>Marital Status</b>		
Married	58	37.91
Unmarried	95	62.09
<b>Education Status</b>		
Literate	149	97.39

Illiterate	4	2.61
<b>If Literate, Level of Education(n=149)</b>		
General literate (Can read and write only)	12	8.05
Basic literature (Up to 8 class)	24	16.11
Secondary level	74	49.67
Higher secondary and above	39	26.17
<b>Occupation</b>		
Employed	94	61.44
Unemployed	59	38.56

*employed=service,business, daily wages, agriculture,self employed; unemployed= house maker and students*

Table 1 shows socio-demographic variables of the respondents. Out of 153 respondents majority 41.83% were age group of 20-25 years. 73.85% followed Hinduism where only 4.58% followed Christianity. More than half of respondents 54.26% were upper caste group and least 4.58% were from dalit. More than half of

respondents 62.09% were married. Nearly cent percent respondents 97.39% were literate and only 2.61% were illiterate. Among them half 49.67% had completed secondary level and least 8.05% could read and write. In relation to occupation most of the respondents 61.44% were employed and 38.56% were unemployed.

**Table 2: Respondents' Personal History related Characteristics.**

Variables	Frequency	Percentage
<b>n =153</b>		
<b>History of blood donation</b>		
Yes	53	34.64
No	100	65.36
<b>If yes, time/s of donation (n =53)</b>		
One time	22	41.51
Two times	7	13.21
Three times	8	15.09
>Three times	16	30.19
<b>If yes, reason for donating blood(n=53)</b>		
Friend or relative needed blood	9	17.0
Voluntary	44	83.0
<b>If No, reason for not donating blood(n=100)</b>		
Lack of time	16	16.0
Medically unfit for donation	4	4.0
Fear of needle, sight of blood, fainting	16	16.0
No request for blood	39	39.0
Lack of information as when, how and where to donate	2	2.0
Fear of weakness from blood donation	18	18.0
Fear of transmission of HIV/Hepatitis	5	5.0
<b>History of receiving blood</b>		
Yes	8	5.23
No	145	94.77
<b>Reason for receiving blood(n=8)</b>		
Due to anemia	2	25.0
Due to accident	4	50.0
Due to operative procedure	1	12.5
During pregnancy	1	12.5

Table 2 shows out of 153 respondents 34.64% were blood donor. Among 53 blood donors, 41.51% donated once and 13.21% donated twice where voluntary blood donors were 83.5%. Out of 100 non donors, the reason

for not donating blood was no request for blood 39% and lack of information 2%. Among 153 respondents, 5.23% had received blood previously and the reason for receiving blood was due to accident 50%.

**Table 3: Association between Respondents' Level of Awareness regarding Blood Donation and Selected Variables.**

Variables	Level of Awareness		$\chi^2$ value	p value
	Adequate n (%)	Inadequate n (%)		
<b>n=153</b>				
<b>Age</b>				
≥30	42(60)	28(40)	1.354	0.244
<30	42(50.6)	41(49.4)		
<b>Sex</b>				
Male	48(57.1)	36(42.9)	0.378	0.539
Female	36(52.2)	33(47.8)		
<b>Religion</b>				
Hindusm	70(61.9)	43(38.1)	8.664	0.003#
Non-Hindu(Buddhism & Christinism)	14(35)	18(65)		
<b>Ethnicity</b>				
Bhramhin, Chhetri	47(56.6)	36(43.4)	0.218	0.641
Others (Dalit, Janajati)	37(52.9)	33(47.1)		
<b>Marital Status</b>				
Married	31(53.4)	27(46.6)	0.080	0.778
Unmarried	53(55.8)	42(44.2)		
<b>Level of Education</b>				
Secondary and Higher	67(59.3)	46(40.7)	3.364	0.067
Below Secondary(general & basic literate)	17(42.5)	23(57.5)		
<b>Occupation</b>				
Employed	55(58.5)	39(41.5)	1.282	0.258
Unemployed	29(49.2)	39(41.5)		

#Significance level < 0.05, employed=service, business, daily wages, agriculture, self employed; unemployed= house maker and students

Table 8 shows that the level of awareness regarding blood donation is statistically significant with the respondents' religion (p= 0.003).

The level of awareness regarding blood donation was not significant with age (p=0.244), sex (p=0.539), ethnicity (p=0.641), marital status (p=0.778), level of education (p=0.067) and occupation (p=0.258).

**Table 4: Association between Respondents' Level of Awareness regarding Blood Donation and Personal History related Characteristics.**

Variables	Level of Awareness		$\chi^2$ value	p value
	Adequate n (%)	Inadequate n (%)		
<b>n=153</b>				
<b>History of blood donation</b>				
Yes	35 (66)	18 (34)		
No	49 (49)	51 (51)	4.06	0.04#
<b>History of receiving blood</b>				
Yes	8 (100)	0 (0)		
No	76 (52.4)	69 (47.6)		NA

#Significance level <0.05  
NA= Not applicable

Table 9 shows that the level of awareness regarding blood donation was statistically significant with history of blood donation (p=0.04).

The level of awareness was not statistically significant with history of receiving blood.

**Table 5: Respondents' Attitude regarding Blood Donation.**

Attitude	SA	A	N	D	SD	Mean
	n (%)	n (%)	n(%)	n(%)	n(%)	± SD
Blood donation is life saving work	130(85)	23(15)	-	-	-	4.85±0.36
My donation will not encourage others to donate	3(2)	8 (5.2)	7(4.6)	78(51)	57(37.3)	4.16±0.88
I would donate blood if I was assured that the donated blood will be given to me, my family and needed person in the future	100(65.4)	29(19)	6(3.9)	11(7.2)	7(4.6)	4.33±1.14
I would donate blood if there were incentives or rewards	8(5.2)	7(4.6)	5(3.3)	32(20.9)	101(66)	4.38±1.10
I think donation is harmful to donors	5(3.3)	5(3.3)	5(3.3)	46(30.1)	92(60.1)	4.41±0.95
I think donation leads to anemia	5(3.3)	19(12.4)	14(9.2)	52(34)	63(41.2)	3.97±1.14
If I donate blood, I will be saving lives	123(80.4)	27(17.6)	-	-	3(2)	4.75±0.65
Only physically strong people can donate blood	64(41.8)	50(32.7)	5(3.3)	18(11.8)	16(10.5)	2.16±1.36
Someday I need blood transfusion	123(83.70)	22(14.4)	-	1(0.7)	2(1.3)	4.78±0.61
Blood donation helps in blood purification	79(51.6)	56(36.6)	11(7.2)	3(2)	4(2.6)	4.33±0.89
Blood should only collected from voluntary donors	103(67.3)	31(20.3)	5(3.3)	7(4.6)	7(4.6)	4.41±1.07
I intend to donate blood within 6 month	55(35.9)	45(29.4)	22(14.4)	21(13.7)	10(6.5)	3.75±1.26

n=153

SA= Strongly Agree; A= Agree; N=Neutral; D=Disagree; SD=Strongly Disagree

Table 10 shows respondent were highly agree with the statement that blood donation is life saving work (mean±SD 4.85±0.36) whereas they were disagree with

the statement that only physically strong people can donate blood (mean±SD 2.16±1.36).

**Table 6: Association between Respondents' Level of Attitude regarding Blood Donation and Selected Socio-demographic Variables.**

Variables	Level of Attitude		χ <sup>2</sup> value	p value
	Positive n (%)	Negative n (%)		
<b>Age</b>				
≥30	41(58.6)	29(41.4)	4.09	0.043#
<30	35(42.2)	48(57.8)		
<b>Sex</b>				
Male	38(45.2)	46(54.8)	1.47	0.23
Female	38(55.1)	31(44.9)		
<b>Religion</b>				
Hindu	59(49.6)	57(50.4)	0.002	0.096
Non-Hindu(Buddhist & Christian)	20(50)	20(50)		
<b>Ethnicity</b>				
Bhramhin, Chhetri	46(55.4)	37(44.6)	2.40	0.12
Others (Dalit & Janajati)	30(42.9)	40(57.1)		
<b>Marital Status</b>				
Married	25(43.1)	33(56.9)	1.61	0.20
Unmarried	51(53.7)	44(46.3)		
<b>Level of Education</b>				
Secondary and Higher	56(49.6)	57(50.4)	0.002	0.962
Below Secondary(general & basic literate)	20(50)	20(50)		
<b>Occupation</b>				
Employed	44 (46.8)	50 (53.2)	0.80	0.37
Unemployed	32 (54.2)	27(45.08)		

n=153

#Significance level < 0.05, employed=service,business, daily wages, agriculture,self employed; unemployed= house maker and students

Table 12 shows that the level of attitude regarding blood donation was statistically significant with the respondent age (p= 0.043).

The level of attitude regarding blood donation was not statistically significant with sex (p=0.23), religion (p=0.096), ethnicity (p=0.12), marital status (p=0.20), level of education (p=0.962) and occupation (p=0.37).

**Table 7: Association between Respondents' Level of Attitude regarding Blood Donation and Personal History related Characteristics.**

Variables	Level of Attitude		X <sup>2</sup> value	p value
	Positive n (%)	Negative n (%)		
<b>n=153</b>				
<b>History of blood donation</b>				
Yes	22(41.5)	31(58.5)		
No	54(54)	46(46)	2.16	0.14
<b>History of receiving blood</b>				
Yes	6(75)	2(25)		0.167 <sup>f</sup>
No	70(48.3)	75(51.7)		

Significance level &lt;0.05

<sup>f</sup> = Fisher's exact test

Table 13 shows that there is no any statistically significant relation of attitude regarding blood donation

with history of blood donation (p=0.14) and history of receiving blood (p=0.167).

**Table 8: Relationship between Awareness Score and Attitude Score of Respondent regarding Blood Donation n=153.**

Variables	Karl Pearson's Correlation Coefficient	p value
Awareness Attitude	0.187	<b>0.021</b>

Significance level &lt;0.05

Table 14 shows that correlation (r) =0.187 and p value=0.021. So, there was a low degree positive correlation between the awareness and attitude of the respondents regarding blood donation and is statistically significant.

This study revealed that the awareness mean score and SD regarding blood donation was 7.93±2.18 out of 14. This finding is similar to the finding of Melku *et al.*, (2016) which revealed that, the awareness mean score and SD regarding blood donation was 6.62±3.09 out of 12.

## DISCUSSION

### Awareness regarding Blood Donation

These study findings revealed that, the percentage of adequate awareness regarding blood donation was 54.90% and 45.10% of the respondents have inadequate awareness on blood donation. This study finding was similar to the findings of Melku *et al.*, (2016) which revealed that, the percentage of adequate awareness was 56.8% and inadequate awareness was 43.2%.

Whereas the study findings was contrast to the finding of Abderrahman and Saleh (2013) which revealed that, the percentage of adequate awareness was only 28.6% and inadequate awareness was 71.4%. The difference in results might be due to difference in age of the respondents included in study i.e. less than 14 to more than 65, 83.2% respondents were from rural area and 51.6% were never participated in blood donation campaigns.

The another study conducted in Ado-Ekiti, Nigeria by Olubiyi, Babalola, Olubiyi, Umar and Ibraheem (2014) was contrast to the finding which revealed that 96.9% respondents have adequate level of awareness and only 3.1% have inadequate awareness. The difference in results might be due to 52.6% of the respondents had tertiary level of education and availability of means of communication.

This study showed that there is a significant association between level of awareness and religion and history of blood donation (p=0.003) and (p=0.04) of the respondents respectively. This finding was inconsistent to the study of Melku *et al.*, (2016) which revealed that there is no significant association between the level of awareness and religion and history of blood donation of the respondents.

### 5.1.2 Attitude regarding Blood Donation

These study findings revealed that, the percentage of positive attitude regarding blood donation was 49.67% and 50.33% of the respondents have negative attitude on blood donation. This study finding was inconsistent to the finding of Melku *et al.*, (2016) which revealed that, 82.0% of respondents had positive attitude on blood donation where only 18% had negative attitude toward blood donation. The difference in results might be due to more than half of respondents were from age group 20-25 years, 46.1% respondents had higher educational status and might be due to large sample size.

The another study conducted in South Western Uganda by Natukunda, Agaba, Wabuyi, Bortolussi and McBride (2015) is contrast to the finding which revealed that nearly cent percent (94.0%) respondents had positive attitude and only 6.0% had negative attitude regarding blood donation.

This study showed that there is a significant association between level of attitude and age ( $p=0.04$ ) of the respondents. This finding is in contrast to the study of Melku *et al.*, (2016) which revealed that there is no significant association between the level of attitude and age ( $p=1.06$ ) of the respondents.

## CONCLUSION

Based on findings conclusion has been drawn. It is concluded that more than half of the respondents had adequate level of awareness and nearly half of respondents have positive level of attitude regarding blood donation.

However, there is still inadequate level of awareness and attitude among nearly half of respondents. The study shows statistically significant association between level of awareness and religion and history of blood donation. The study shows statistically significant association between level of attitude and age. There is a low degree positive correlation between awareness score and attitude score ( $r=0.187$ ,  $p=0.021$ ) of the respondents regarding blood donation.

Therefore awareness program for community people should be conducted through advertisement, trainings and curriculum inclusion of blood donation to the school and college level students.

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