

**PERCEPTION, MOTIVATORS AND
DETERRENTS ON BLOOD DONATION AMONG
BLOOD DONORS AT CENTRAL WOMEN'S
HOSPITAL (YANGON)**

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M.B., B.S

Master of Hospital Administration (MHA)

University of Public Health, Yangon

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**A Thesis submitted to
the Postgraduate Academic Board of Studies
University of Public Health, Yangon
as the partial fulfillment of the requirements
for the Degree of MHA**

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This thesis has been approved by the Board of Examiners.

Chief Examiner

Examiner (1)

Examiner (2)

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ABSTRACT

In health care system, blood transfusion is one of the important therapeutic procedures which absolutely rely on blood. To get safe blood transfusion, blood donors and their behavior are vital. Voluntary blood donor is limited resource in Myanmar. Voluntary blood donors with healthy behavior are needed to donate regularly and maintain their good behavior throughout their lives. This study was conducted to assess perception, motivators and deterrents on blood donation among blood donors at Central Women's Hospital (CWH) (Yangon) 2019. Cross-sectional hospital-based study was conducted among 166 blood donors at CWH (Yangon) during August to November, 2019. Data collection was done through face-to-face interviews and reviewing hospital records of blood and blood products utilization in CWH (Yangon) from January to June, 2019. Individual in-depth interviews were also done among 6 blood donors. In study, only 31% of blood donors had regular donation practice. Blood donors with good knowledge were 57% while favorable attitude were 60.2%. The commonest reason for blood donation was voluntary (95.2%). Older blood donors had more regular practice than younger people ($P=0.04$). It was observed that the more frequent blood donation, the more regular practice ($P<0.001$). Favorable attitude among regular blood donors was significantly higher than that of non-regular blood donors ($P=0.003$). About 94% of regular blood donors stated that the commonest motivator for regular practice was to help other people. Nearly one-fourth of non-regular donors (23.7%) stated that the commonest deterrent was busyness and about one-fifth of non-regular donors (20.2%) wanted to donate blood only when they directly meet patients. Qualitative study observed that regular practice was favored due to being members of blood donation group and almost all non-regular donors wish to donate blood only when they directly meet patients who need blood. In conclusion, about half of blood donors had good knowledge and favorable attitude. Good knowledge was mainly influenced by higher educational level, repeated and voluntary donor. Favorable attitude was mainly influenced by older age, higher educational level, repeated and voluntary donor. Among every three blood donors, one donates blood regularly. Regular practice was mainly influenced by older age, repeated and voluntary donor, frequent donation times and favorable attitude.

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LIST OF ABBREVIATIONS

ABO Blood Group	Major Blood Group A, B, AB and O
AIDS	Acquired Immunodeficiency Syndrome
BTS	Blood Transfusion Services
BP	Blood Pressure
CSOs	Civil Society Organizations
CWH	Central Women's Hospital
FFP	Fresh Frozen Plasma
Hb%	Hemoglobin level in gram per decilitre
HBV	Hepatitis B Virus
HBs Ag	Hepatitis B Surface Antigen
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
ICU	Intensive Care Unit
MRCS	Myanmar Red Cross Society
NBC	National Blood Center
NICU	Neonatal Intensive Care Unit
PC	Packed Cell
PRP	Platelet Rich Plasma
Rh Blood Group	Rhesus Blood Group
SOPs	Standard Operating Procedures
SPSS	Software Package used for Statistical Analysis
TTIs	Transfusion Transmissible Infections
VBD	Voluntary Blood Donation
VDRL	Venereal Disease Research Laboratory
VNRBD	Voluntary Non-Remunerated Blood Donors
WHO	World Health Organization
YCH	Yangon Children Hospital
YKCH	Yankin Children Hospital

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CHAPTER (1)

INTRODUCTION

1.1. Background information

Blood is a connective body tissue fluid that is mainly necessary for transportation of not only essential substances (oxygen, nutrients, hormones, etc.) to the utilization sites but also metabolic wastes to the excretory sites (liver and kidney). Blood is one of the most important parts of the body. It can also perform in body defense mechanism from pathogens, body homeostasis and regulation of body systems.

Blood transfusion is an injection of a volume of blood, previously taken from a healthy blood donor into a patient who requires blood. It is a procedure that blood or blood products (whole blood, packed cell, platelet rich plasma, fresh frozen plasma, etc.) are infused for the replacement of loss from the body (Department of Medical Service, Ministry of Health and Sports, 2018). Blood is lost from body due to varieties of causes such as physiological causes, pathological causes, injurious causes and causes related to clinical procedures (e.g., operation). In today science growing world, there cannot even manufacture blood artificially. If a person needs blood, it cannot be replaced by other artificial materials until now. So, blood transfusion is a therapeutic procedure which totally depends on blood donors, who gives blood for use in transfusion.

The first blood transfusion was done by was James Blundell, an obstetrician at Guy's and St.Thomas' Hospitals in London (Boyle, Willis and Wren, 2000). In Myanmar, blood transfusion services were started at 1899 at Yangon General Hospital. In 1945, blood bank facility was established at Yangon General Hospital (Moe-Moe-Linn, 2016).

Central Women's Hospital (CWH) (Yangon) is specialized for Obstetrics and Gynecology. Neonatology Unit is also attached to this hospital. It is a Tertiary Care Teaching Public Hospital. It is the main teaching hospital of University of Medicine-

1, Yangon, University of Nursing and Central Midwifery training School. It is located at No.51, Baho Road, Lanmadaw Township, Yangon. Now, it has 800 beds, including the neonatology unit. It was established in 1897 and formerly known as Dufferin Hospital. The blood bank of CWH (Yangon) was established since 1958. It is not a separate department, under the department of clinical pathology. The senior consultant pathologist supervises and manages the pathology department including blood bank. Currently, packed cells (PC) and platelet rich plasma (PRP) are available as component blood products in the blood bank of CWH (Yangon), in addition to whole blood transfusion (Central Women's Hospital, 2018).

1.2. Problem statement

In the health care system, blood transfusion is one of the necessary and important therapeutic procedures which absolutely rely on blood. In order to get safe and clean blood, blood donors and their behavior are vital. Non-remunerated voluntary blood donor means that a person gives blood, plasma or cellular components with person's own free will and accepts no incentive/payment for it, either in the form of money, or in kind of a substitute for money (Aye-Aye-Mon, 2018). So, voluntary blood donors are the best source of safe blood transfusion. World Health Organization (WHO) gives support to all countries to establish blood services based on full non-remunerated voluntary blood donations (WHO, 2016). Voluntary blood donor is one of the limited resources in health system. Voluntary blood donors with healthy behavior are needed to donate regularly and maintain their good behavior throughout their lives.

The blood transfusion service manages the distribution and use of blood and blood components according to requirements. In Myanmar, there are many constraints in blood transfusion service (Thida-Aung, 2019). The important constraints are lack of awareness of importance and quality of transfusion service both in administrators, implementers and public and restricted resources such as human, technical skills and financial. Besides, voluntary blood donor is the limited resource in Myanmar health system.

According to the hospital data of Central Women's Hospital (CWH) (Yangon) in 2018, the average number of receiving donated blood is about 300 units per month and the average number of supplying blood is about 600 units per month. So, the

demand of blood exceeds than the supply in this hospital. Haemorrhage (both ante-partum and post-partum haemorrhage) is one of the most common causes of maternal death worldwide (Maternal and Reproductive Health Division, 2018). The inadequacy of blood is one of the important causes of maternal and infant mortality in hospitals (Hobbes Harrington, 2012). Blood transfusion can save the lives of mother and infant due to haemorrhage.

By one of the recommendations of Moe-Moe-Linn (2016), more voluntary non-remunerated blood donors should be recruited at CWH (Yangon). Therefore, voluntary blood donor is the limited resource in this hospital (Moe-Moe-Linn, 2016)

1.3. Justification

In Myanmar, a blood donation rate is less than 0.1% (less than 1 donation per 1000 population) (Aye-Aye-Mon, 2018). Voluntary blood donor is the limited resource in Myanmar. That is why it is necessary to explore the perception, motivators and deterrents on blood donation among blood donors.

In Myanmar, there are many studies on blood safety practice and utilization of blood and blood product but there is still limited study in accessing the perception, motivators and deterrents on blood donation among blood donors. This study will be conducted to fill this gap to a certain extent.

By assessing the perception, motivators and deterrents in blood donation, health professionals can understand how voluntary donors engage with health care system and patients according to their respective socio-cultural, economic and demographic circumstances. Health administrators can solve difficulties of voluntary donors and support them to donate regularly. By exploring the experiences and challenges on blood donation among blood donors, health care administrators can find out the way to persuade people to become voluntary blood donors and also to teach them how to maintain their healthy behavior for regular blood donation.

This study results can be used by health care administrators in designing future plans for prevention of unsafe blood donation and management of health problems among the non-remunerated voluntary blood donors and patients who need blood transfusion. The results from this study can be used by policymakers to encourage blood donors for non-remunerated voluntary blood donation which can lead to

assurance of safe blood transfusion in all health care services in Myanmar. This can contribute in strengthening of Myanmar health system.

CHAPTER (2)

LITERATURE REVIEW

2.1. Blood donation

Blood donation also known as blood banking which means that the process of collecting, testing, preparing and storing whole blood and its components intended primarily for transfusion. Blood donors are typically unpaid volunteers, but they may also be paid by commercial blood donation (Encyclopedia, 2018). Non-remunerated voluntary blood donor means that a person gives blood, plasma or cellular components with person's own free will and accepts no incentive/payment for it, either in the form of money, or in kind of a substitute for money (Aye-Aye-Mon, 2018). Regular blood donor means blood donors with 4 donations or over 4 donations within previous 2 years (Getta et al., 2018).

2.1.1. Awareness of blood donation

Since 2004, World Blood Donor Day Celebration has been done on 14 June, annually all over the world by the guidance of WHO, for improving the awareness, safety and adequacy of national blood supplies by promoting a substantial increase in the number of safe, non-remunerated, voluntary donors who give blood regularly (WHO, 2019). The theme for Blood donor Day 2019 is "Blood donation and universal access to safe blood transfusion" to achieve universal health coverage (WHO, 2019).

2.1.2. Benefits of blood donation

There are many benefits of blood donation. The top four benefits of blood donation are (1) feeling good for saving lives of others, (2) burning calories, (3) lowering the risk of getting cancer and (4) maintaining heart health. So, donating blood is a win- win situation for everyone involved. Recipients gain a vital substance and donors obtain improvement of health (Florida health Department, 2018). Moreover, blood donation reduces risks of developing cardiovascular diseases such as heart failure, atherosclerosis, and stroke (Getta et al., 2018). Advantages of blood donation are benefits of overall physical health status, reduced blood pressure,

free medical check-up, improvement of mental health. Disadvantages of blood donation are bruising and pain at the site of injection, minor weakness, minor dizziness, nausea and occasional continued bleeding (Waller, n.d.).

2.2. National system for blood donor selection

WHO published the guidelines on assessing donor suitability for blood donation and this can guide, help and support countries in establishing effective national systems for blood donor selection, including policies, guidelines and criteria to ensure the safety of both the recipients and the donors. The selection and management of blood donors is an essential process of the blood transfusion service. National health authorities and blood transfusion services are responsible for ensuring that a national system is established for the selection of all blood donors through an assessment of their suitability to donate blood. The national system for blood donor selection should include the national policy and legislative framework, the national guidelines and criteria on blood donor selection, public information and donor education, suitable infrastructure and facilities, adequate financial and human resources, quality system, including standard operating procedures, documentation and records, donor haemovigilance and the monitoring and evaluation system (WHO, 2012).

2.2.1. Eligible criteria and deferral criteria for blood donation

The Department of Medical Service of Myanmar Ministry of Health and Sports published guidelines for blood transfusion service and the following are main items concerning about eligible criteria and deferral criteria for blood donation. The fundamental function of blood bank starts when blood is collected from an appropriate donor at appropriate time. The main objective of donor selection is to avoid any harm of both donors and recipients (patients). For donor selection, the history, physical examination and laboratory investigations of candidates must be assessed to approve fitness for donation (Department of Medical Service, Ministry of Health and Sports, 2018).

A background history is important since it would be the first filter sieve before actual donation. The conditions leading to permanent deferral are documented history of severe anaphylaxis, autoimmune disease, any malignant disease, diabetes in

requirement of insulin therapy, injectable drug abuse, infections especially carriers of HIV, HBV, HCV, leishmaniasis, known primary polycythemia and cardiovascular diseases (coronary heart disease, severe arrhythmias, history of cerebrovascular accident, arterial thrombosis and recurrent venous thrombosis). The conditions leading to temporary deferral are endoscopy with biopsy, acupuncture, tattooing or body piercing (an interval of 12 months from the time of the procedure must pass before donation), epilepsy (3 years off treatment and without an attack), fever or flu-like illness (until 2 weeks after cessation of symptoms), kidney disease such as acute glomerulonephritis AGN (until 5 years after complete recovery), osteomyelitis (until 2 years after cure), rheumatic fever (until 2 years after attack, without chronic disease), major surgery (until 6 months after procedure), minor surgery (until 1 week after procedure), transfusion of blood and blood products (until 12 months after procedure) and immunization of live attenuated vaccines (until 4 weeks after immunization) and some medications (Department of Medical Service, Ministry of Health and Sports, 2018).

Regarding eligible criteria, age of donors must be a minimum of 18 years and maximum 60 years. If a donor is over 60 years of age, fitness for donation will be decided by the physician. For men, minimum weight limit for donor is 110 lb and it is 100lb for women. For men, minimum Hb% limit for donor is 12g% and it is 11g% for women. Blood pressure (BP) must be assessed by medical officers. Variations of BP between 140/100 mmHg and 100/60 mmHg can be accepted. For hazardous occupations such as aircraft piloting, bus/train driving, crane/bulldozer operation, climbing heights, gliding and diving especially deep-sea dive, a time interval of at least 12 hours must be taken before returning to work. Special conditions of women such as pregnancy, lactation and menstruation time shall be factors for deferral (Department of Medical Service, Ministry of Health and Sports, 2018).

2.3. Blood donor recruitment and retention

The main problems in donor recruitment were the lack of a national policy, strategic plan, promotional and educational material and inadequate donor database. To overcome all these problems, long-term and medium-term donor recruitment programmes were needed. Donor motivation programmes should be able to realistically assess community needs and consideration of the ethical issues. Donor

retention is very important for getting regular and repeated voluntary blood donor for safe blood transfusions. Donors should be retained by giving them special care, a feeling of being an important person and reducing waiting period (WHO, 2001).

In Myanmar, lack of awareness of importance and quality of blood transfusion service by not only administrators but also implementors and public is one of the important problems. Public awareness is raised by encouragement and supported by famous religious leaders and mass blood donation in universities and other public places (Thida-Aung, 2019). Blood services in Myanmar have been mainly provided by National Blood Centre (NBC) since 1945. NBC has been trying to develop blood banking services in Myanmar. NBC also tried to collaborate with the Myanmar Red Cross Society (MRCS), which had access to blood transfusion service of neighboring countries and local universities. In addition to the collaboration with local and international agencies for technical support and funding support, training for healthcare staffs has involved in blood transfusion service became essential and important (Aye-Aye-Mon, 2018). About 600 additional blood donations are needed per week for NBC to meet its targets. NBC now receives blood from at least 300 donors a week, with up to 70 donors coming from Shwe Dagon Pagoda near the centre (Aung-Phay-Kyi-Soe, 2019).

Strategies to identify, recruit and retain donors from low-risk populations were emphasized. Donors should be made aware of TTIs, risk behavior and window period of an infectious disease. The donor population could be made aware of the above through public awareness programmes. Strict donor screening and selection criteria with opportunities for self-deferrals should be followed (WHO, 2001). In Myanmar, by coordination and collaboration with NBC, MRCS has been creating public awareness programme by meeting with local administrative authorities and communities, and for dissemination of the value of voluntary blood donors (Aye-Aye-Mon, 2018).

2.4. Related studies in Myanmar

One study was conducted the factors influencing voluntary blood donation in National Blood Center (Yangon) in 2018. This study stated that mean knowledge score of blood donors on voluntary blood donation was (58.4%) and this may be inadequate. The old had better knowledge than the young and the repeat donors had

better knowledge than new donors. There was significant association of knowledge level on voluntary blood donation with higher educational level. Most (94.6%) blood donor had favorable attitude towards blood donation. The study found that majority (88.6%) of blood donors were repeated donors (Aye-Aye-Mon, 2018)

In Moe-Moe-Linn study in 2016, there were two categories of blood donors, the non-remunerated voluntary donors and the replacement donors in Central Women's Hospital (Yangon). Among them, voluntary donors were 57% and replacement donors were 43%. So, the voluntary donors were more than replacement donors by 14%. Voluntary donors could not come by the time blood required because of their social difficulties. Travelling is one of the barriers and if we can manage it, more voluntary donors are available (Moe-Moe-Linn, 2016)

In Win-Win-Khaing study in 2011, voluntary donors were 61% and replacement donors were 39% in Central Women's Hospital (Yangon). So, the voluntary donors were more than replacement donors by 22% (Win-Win-Khaing, 2011)

2.5. Related studies in Other Countries

In Iran study in 2018, a considerable proportion of university students at the Semnan University of Medical Sciences have low awareness of and un-favorable attitude towards blood donation. The low awareness and un-favorable attitude towards blood donation can be assumed as important factors leading to the lack of interest and poor participation in blood donation among this population (Askari Majdabadi et al., 2018).

In Brazil study in 2018, among primary health care users, 23.3% of respondents were blood donors, 63.4% were non-donors and 13.3% reported being unable to donate blood. There is evidence that knowledge of primary healthcare users regarding blood donation is associated with sex, educational level, and previous blood donation (Zucoloto and Martinez, 2018).

In systematic review study in 2018, the most frequent motivators for male blood donation were altruism, favorable attitude towards incentives, health check and perceived norms. Marketing campaigns for retention of male donors should focus on these recognized motivators (Carver et al., 2018).

Bangladesh study in 2017 stated that a low donor turnover and temporary deferral criteria were low haemoglobin percent, low weight, and fear of pain as the reasons for lower female blood donors. Over half (56%) of donors had knowledge about the eligible criteria for blood donation and 47.3 % did not know the eligible haemoglobin percent to donate blood and the amount of blood volume in each donation. Majority of blood donors reported positive feelings like a sense of satisfaction and were interested to donate blood regularly and had a favorable attitude towards it (Akhtar et al., 2017).

In Brazil study in 2016, 55% of donors were between age group 20 to 29 years, 30% were between age group 30 to 39 years, and 15% were between age group 40 and 49 years. Regarding gender, most (95%) were women and only a few (5%) were man. 45% were Catholic religion, 30% were Evangelical religion, 10% were Spiritualists and 15% did not tell their religion. Half donors (50%) were single, nearly half (40%) were married and only a few (5%) were widowed (Conceição et al., 2016)

2.6. Conceptual framework

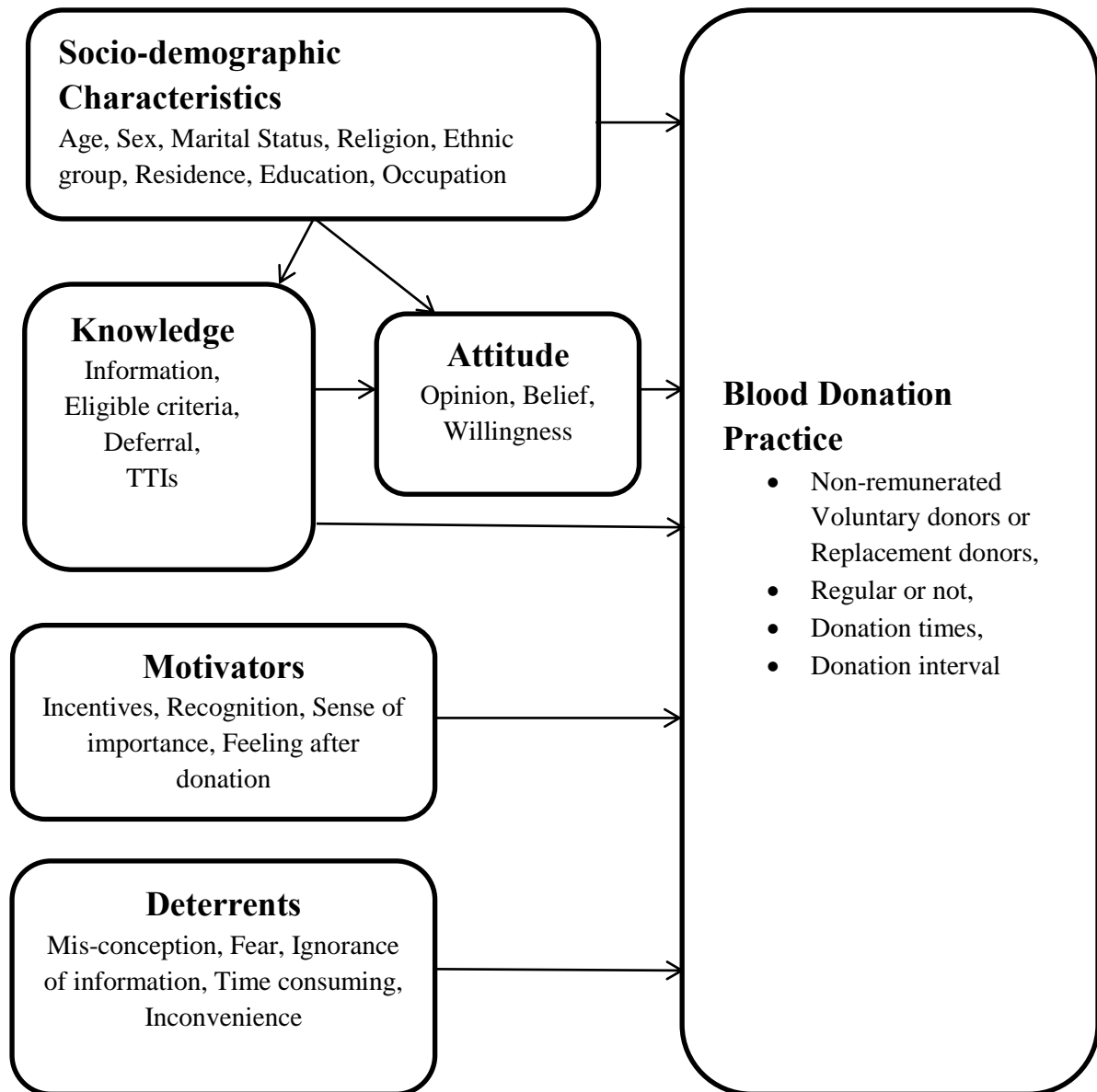


Figure (2.1) Conceptual framework of perception, motivators and deterrents on blood donation among blood donors

CHAPTER (3)

OBJECTIVES

3.1. General objective

To assess perception, motivators and deterrents on blood donation among blood donors at Central Women's Hospital (Yangon) 2019

3.2. Specific objectives

1. To describe the utilization of blood and blood products in Central Women's Hospital (Yangon) by reviewing hospital records
2. To assess the perception (knowledge and attitude) on blood donation among blood donors
3. To determine the practice, motivators and deterrents on blood donation among blood donors
4. To explore the experiences and challenges of blood donation among blood donors

CHAPTER (4)

RESEARCH METHODOLOGY

4.1. Study design

Cross sectional hospital-based descriptive study using mixed method was done.

4.2. Study population

- 1) Records review of blood and blood products utilization in Central Women's Hospital (Yangon) from January to June, 2019
- 2) Blood donors who came to Central Women's Hospital for blood donation during the study period were included.

4.3. Study area

Blood bank, Central Women's Hospital (Yangon).

4.4. Study period

From August to November, 2019.

4.5. Sample size determination

$n = z^2 pq/d^2$ (Daniel & Cross, 2013) where,

n = sample size

d = absolute precision required on either side of the proportion if confidence level=95%

z=1.96

p = assumed proportion of population who donates blood regularly (this is not known and it is assumed to be 50%) 0.5

q = 1-p = 0.5

d= margin of error = 0.08

Sample size n was calculated as follow: $n = z^2 pq/d^2 = (1.96)^2 * (0.5) * (0.5) / (0.08)^2 = 150$

Minimal required sample size is 150.

4.6. Sampling procedure

For quantitative data, all blood donors who came to blood bank on the day of data collection were recruited consecutively until the required sample size was fulfilled.

For qualitative data, in-depth interview was done with three donors who donate blood regularly and three donors who donate blood non-regularly.

4.7. Data collection methods and tools

Quantitative data: Data collection was done by face-to-face interviews with structured questionnaires and by reviewing hospital records of blood and blood products utilization in Central Women's Hospital (Yangon) from January to June, 2019. Questionnaire consists of four parts including blood donors' socio-demographic characteristics, their knowledge about blood donation, their attitude towards blood donation and their practice, motivators and deterrents on blood donation. Before data collection, pre-test was done at blood bank of Yangon Children Hospital.

Qualitative data: In-depth interviews were done using interview guidelines. Note taking and voice recording were done with their permission. Field notes were written at the end of each interview.

4.8. Data management and analysis

4.8.1 Quantitative data

Completeness of questionnaires was checked after completing face-to-face questionnaires every day. Data from the questionnaires were entered into the computer after careful checking the coding by data checking system using the Epi data program, preparation of properties of data for all variables and minimizing of errors, to avoid missing data, to ensure skip pattern, to ensure possible range.

After data entry was completed, data was exported to SPSS version 16, the data cleaning process for errors, missing and outliers was done carefully. Data analysis was done by SPSS version 16.

In exploratory data analysis, the final cleaning of data was done by looking for previously unrecognized illogical errors and any inconsistencies. After preliminary data analysis for further data cleaning and exploratory data analysis for data distributions, descriptive statistics on respondents' characteristics, socio-demographic

characteristics were calculated. The summary measures (means, standard deviations, maximum, minimum) for continuous variables and frequency and percent for categorical variables were calculated.

Chi-square analysis was used to determine significant association between blood donation practice and independent variables i.e., socio-demographic characteristics, perception (knowledge and attitude), motivators and deterrents. *P* value less than 0.05 was considered statistically significant.

After analyzing the collected data, findings were presented by means of graphs, tables and appropriate figures.

4.8.2 Qualitative data

For qualitative study, recordings of the interviews were transcribed into text (transcripts) in exactly the same words (verbatim) as in the interviews. These transcripts included non-verbal expressions of the respondents.

The researcher read all the notes and transcripts thoroughly from the beginning to the end to familiarize the data and context within which data was collected. Then themes were identified based on the existing theory and literature search.

If necessary, themes were identified from the data via through and repeated reading. A coding system was set up, including themes, sub-themes and codes. Coding was done and data analysis was done using thematic analysis.

4.9. Ethical consideration

The study was conducted according to the guidelines issued by the University of Public Health Institutional Review Board UPH-IRB and ethical clearance obtained from UPH-IRB (2019/MHA/7). The study was conducted by approval of Senior Medical Superintendent and Senior Consultant Pathologist of blood bank of CWH (Yangon).

Before the interview, an introduction to the study and its purpose as well as an explanation about the selection of the research subjects and the procedure were thoroughly explained to the participants. In addition, the possible benefits such as gaining new knowledge from this study and the freedom to withdraw were explained. Free and written informed consent was obtained from the respondents only after knowing about the study in a clear and manifest way.

The opportunity for the participants to ask questions regarding the research was provided. The place for data collection was chosen appropriately in a private setting. No name was mentioned and the coding system was used in data collection. The privacy and confidentiality of the collected information from the research participants was strictly safeguarded.

The investigator conducted all analyses. The investigator and supervisors assessed all data. After complete data analysis, a report on the findings and results of the study were written. The investigators published the finally approved version of the report that had been critically revised for important intellectual content. The personal identifiers were not published.

CHAPTER (5)

FINDINGS

5.1 Findings from secondary data (Hospital record of utilization of blood and blood products)

Table (5.1) Distribution of types of blood donor (January to June, 2019)

Month	Non-remunerated Voluntary Donors				Replacement Donors				Total	
	New (First time)		Repeated		New (First time)		Repeated		Freq	%
	Freq	%	Freq	%	Freq	%	Freq	%		
January	49	12.5	218	55.6	28	7.2	97	24.7	392	100
February	39	12.3	155	49.1	22	7.0	100	31.6	316	100
March	123	26.4	208	44.6	38	8.2	97	20.8	466	100
April	57	17.8	134	41.9	57	17.8	72	22.5	320	100
May	97	23.8	140	34.3	75	18.4	96	23.5	408	100
June	91	25.3	113	31.4	66	18.3	90	25.0	360	100
Total	456	20.2	968	42.8	286	12.6	552	24.4	2262	100

The percentage of new (first time) donors from January to June, 2019 was 32.8% and that of repeated donors was 67.2%. The repeated donors were more than new donors by 34.4% (Table 5.1).

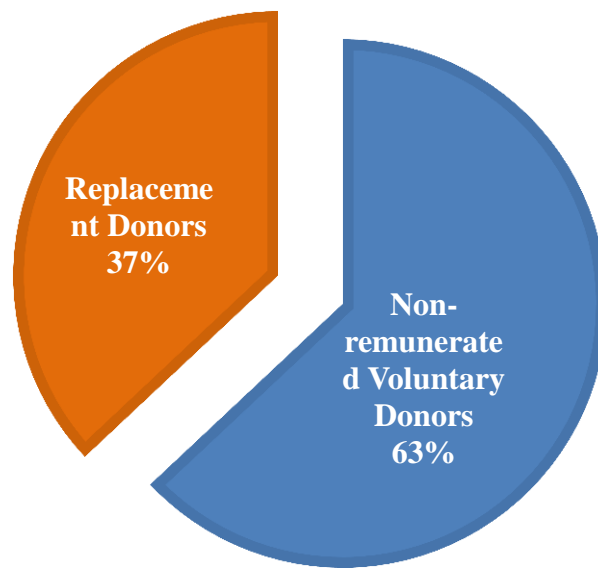


Figure (5.1) Frequency of distribution of types of donor (January to June, 2019)

There are two types of blood donors, the non-remunerated voluntary donors and the replacement donors in Central Women's Hospital (Yangon). The percentage of the voluntary donors from January to June, 2019 was 63% and that of the replacement donors was 37%. The voluntary donors were more than the replacement donors by 26% (Figure 5.1).

Table (5.2) Distribution of blood groups serology among blood donors (January to June, 2019)

Month	Blood group A		Blood group B		Blood group AB		Blood group O		Total	
	Freq	%	Freq	%	Freq	%	Freq.	%	Freq.	%
January	70	17.9	120	30.6	37	9.4	165	42.1	392	100
February	67	21.2	112	35.5	20	6.3	117	37.0	316	100
March	114	24.5	147	31.5	38	8.2	167	35.8	466	100
April	76	23.8	89	27.8	31	9.7	124	38.7	320	100
May	100	24.5	122	29.9	11	2.7	175	42.9	408	100
June	91	25.3	115	31.9	53	14.7	101	28.1	360	100
Total	518	22.9	705	31.2	190	8.4	849	37.5	2262	100

From January to June, 2019, blood group O was most commonly received (37.5%), the second most was blood group B (31.2%), the third was blood group A (22.9%) and the least commonly received was blood group AB (8.4%) (Table 5.2).

**Table (5.3) Distribution of utilization of blood components by month
(January to June, 2019)**

Month	Whole Blood/ Cryoprecipitate No. (%)	Packed Cell No. (%)	Platelet Rich Plasma No. (%)	Platelet Concentrate Plasma No. (%)	Fresh Frozen Plasma No. (%)	Total No. (%)
January	7 (2.3)	205 (67.7)	27 (8.9)	9 (2.9)	55 (18.2)	303 (100)
February	29 (8.6)	187 (55.6)	13 (3.9)	13 (3.9)	94 (28.0)	336 (100)
March	2 (0.6)	232 (64.1)	25 (6.9)	25 (6.9)	78 (21.5)	362 (100)
April	1 (0.3)	218 (70.8)	21 (6.8)	10 (3.3)	58 (18.8)	308 (100)
May	9 (2.9)	208 (67.3)	28 (9.1)	16 (5.2)	48 (15.5)	309 (100)
June	2 (0.7)	189 (63.0)	28 (9.3)	11 (3.7)	70 (23.3)	300 (100)
Total	50 (2.6)	1239 (64.6)	142 (7.4)	84 (4.4)	403 (21.0)	1918 (100)

According to the data of blood bank of CWH (Yangon), packed cells was the most used of blood (64.6%) and fresh frozen plasma was the second most used of blood (21.0%). Platelet rich plasma (7.4%), platelet-concentrate plasma (4.4%) and whole blood / cryoprecipitate (2.6%) were used respectively within 6 months (Table 5.3).

Table (5.4) Utilization of issued blood by different wards (January to June, 2019)

Wards	Jan	Feb	March	April	May	June	Total
B Block (Infection)	202	192	202	183	201	178	1158 (38.7)
NICU	66	86	75	59	78	62	426 (14.2)
Emergency	46	62	63	55	44	71	341 (11.4)
Oncology	57	41	41	49	36	31	255 (8.5)
C Block (Gynae)	36	35	44	31	41	28	215 (7.2)
Labour Room	31	29	25	45	37	37	204 (6.8)
A Block (Obstetric)	31	13	20	28	28	35	155 (5.2)
OT	6	22	36	33	13	20	130 (4.3)
ICU	24	27	31	5	11	12	110 (3.7)
Total	499	507	537	488	489	474	2994 (100)

The greatest utilization of issued blood was found in B block (Infection ward) and Neonatal Intensive Care Unit (NICU), 38.7% and 14.2% respectively, whereas the least utilization of issued blood was Intensive Care Unit (ICU) (Table 5.4).

Table (5.5) Blood inventory data (January to June, 2019)

No	Blood Units	Jan	Feb	March	April	May	June	Total	
1	Units Received	392	316	466	320	408	360	2262	
2	Received from Others	(i) CWH	8	12	18	4	6	2	50
		(ii) YCH/ YKCH	55	1	1	55	0	45	157
		(iii) NBC	110	147	121	95	117	141	731
3	Units Issued	499	507	537	488	489	474	2994	
4	Units Discarded	(i) TTI positive	10	5	18	18	14	19	84
		(ii) Expired	13	7	0	0	0	0	20
		(iii) Clotted	2	0	0	1	1	0	4

A total of 2262 units of blood were received from January to June, 2019. Among them, 938 units of blood were received by others such as NBC, YCH and YKCH. Total issue of blood units were 2994 units within 6 months. So, total issue of blood units exceeded than total received blood units by 732 units within 6 months. Total discarded blood units were 108 units (i.e, 4.8% of total received blood). The reasons for discarded blood were due to Transfusion Transmitted Infection (TTI) positive which comprised of 77.8%, expired blood which comprised of 18.5% and clotted blood which comprised of 3.7% (Table 5.5).

Table (5.6) Distribution of TTIs among donors (January to June, 2019)

Test \ Donor	New (first time)	Repeated	Total	%	Prevalence of TTIs among donors
HBsAg	30	27	43	51.2	19/ 1000 donors
VDRL	10	9	25	29.7	11/ 1000 donors
HIV	6	4	13	15.5	6/ 1000 donors
HCV	1	2	3	3.6	1/ 1000 donors
Total	47	42	84	100	37/ 1000 donors

From January to June, 2019, among total blood donors 2262, TTI seropositive were 84 units i.e., prevalence of 37 per 1000 blood donors. TTI seropositive were more common in new (first time) donors than repeated donors. Among TTIs from donors, HBsAg (+) was the most, VDRL (+) was the second most and HIV was the third. TTI positive donors were referred to medico-social workers to counsel for their disease status, their treatment and referred to the respective hospital (Table 5.6).

Table (5.7) Number of Deferred Blood donors (January to June, 2019)

	Jan		Feb		March		April		May		June		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Hb%	-	5	1	6	3	9	2	6	1	6	3	6	10	38
													(5.2%)	(19.7%)
BP	11	5	4	3	6	3	11	3	10	4	13	4	55	22
													(28.5%)	(11.4%)
Other	6	6	10	4	16	10	3	-	6	1	5	1	46	22
													(23.8%)	(11.4%)
Total	17	16	15	13	25	22	16	9	17	11	21	11	193	
													(100%)	

According to the data of blood bank of CWH (Yangon), the most common reason for deferred blood donors was due to blood pressure (39.9%) within 6 months (Table 5.7).

5.2 Socio-demographic characteristics of blood donors

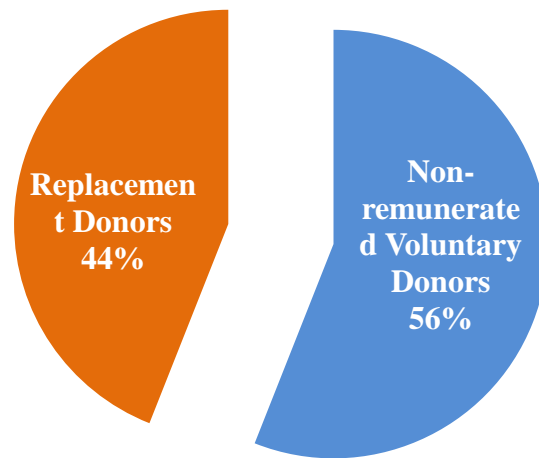


Figure (5.2) Number of type of blood donors (n=166)

Among all the respondents, the non-remunerated voluntary donors were more than replacement donors by 12% (Figure 5.2).

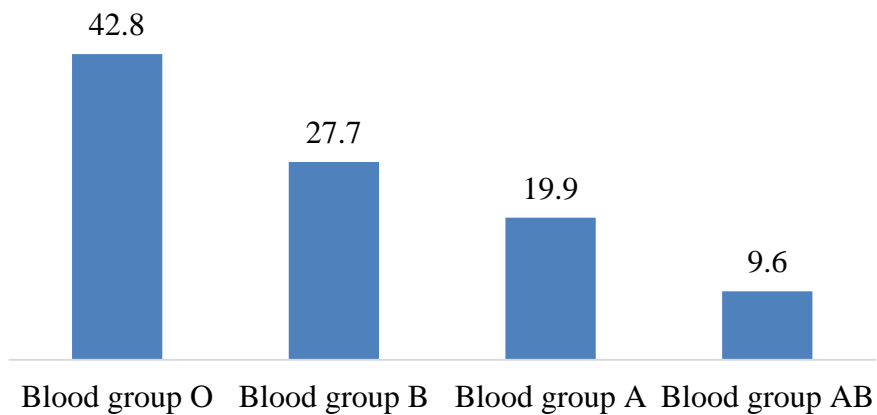


Figure (5.3) Number of type of blood group among blood donors (n=166)

There were 71 blood group O donors, 46 blood group B donors, 33 blood group A donors and 16 blood group AB donors. So, blood group O was the most common, blood group B was second most common, blood group A was third most common and blood group AB was the least common among the respondents (Figure 5.3).

Table (5.8) Socio-demographic characteristics of blood donors (n=166)

Variables	Frequency	Percentage
Age		
18 – 25	50	30.1
26 – 35	64	38.6
36 – 45	43	25.9
46 – 60	9	5.4
Sex		
Male	114	68.7
Female	52	31.3
Religion		
Buddhist	156	94.0
Christian	5	3.0
Islam	3	1.8
Hindu	2	1.2
Ethnic group		
Bamar	138	83.1
Karen	11	6.6
Rakhine	5	3.0
Muslin	3	1.8
Hindu	2	1.2
Others	7	4.2
Marital status		
Single	85	51.2
Married	75	45.2
Divorced/Separated	2	1.2
Widower / Widow	4	2.4
Educational level		
Only read and write	1	0.6
Primary school	17	10.2
Middle school	33	19.9
High school	48	28.9
University	19	11.4
Graduate and above	48	28.9

Table (5.8) Socio-demographic characteristics of blood donors (n=166)(Contd.)

Variables	Frequency	Percentage
Residence by District		
West District	69	41.6
East District	40	24.1
South District	29	17.5
North District	28	16.9
Residence by Urban/Rural		
Urban	145	87.3
Rural	21	12.7
Occupation		
Dependent / Un-employee/ Housewife	18	10.8
Government Employee	6	3.6
Company Employee	41	24.7
Self-Employed	56	33.7
Student	17	10.2
Monk	16	9.6
Others	12	7.2

Among respondents, age group between 26 to 35 years was commonest. Male blood donors were more common than female blood donors. Regarding religious status, Buddhist was the commonest. Regarding ethnic groups, Bamar was the commonest among blood donors. Considering marital status, most blood donors were single status. According to highest educational level, both high school level and graduate and above level were the commonest. As CWH (Yangon) is situated at West District, nearly half of blood donors resided in West District. Most blood donors were from urban area and self-employed (Table 5.8).

5.3. Knowledge of blood donors about blood donation

Table (5.9) Knowledge of blood donors about blood donation (n=166)

Knowledge	Frequency	Percentage
Knowing of Common Blood Group		
Yes	118	71.1
No	48	28.9
Mention of Common Blood Group(n=118)		
Mention all 4 groups	95	80.5
Mention 3 groups	21	17.8
Mention 2 groups	2	1.7
Knowing of his/her own Blood Group		
Yes	159	95.8
No	7	4.2
Ever heard about Blood Donation		
Yes	166	100.0
No	0	0.0
Source of Information of Blood Donation		*Multiple response
Voluntary Blood Donors	142	85.5
From relatives/ friends/ neighbors	126	75.9
Mass media/ Posters/ Pamphlets	86	51.8
From patients who need blood	27	16.3
From blood donation group	25	15.1
From blood donation ceremony	7	4.2
Parents/Husband/Wife being blood donors	7	4.2
From Damma book/ Damma CD	5	3.0
From hospitals and clinics	4	2.4
Received transfusion in the past	4	2.4
Others	7	4.2
Can human blood be manufactured artificially?		
Yes	7	4.2
No	125	75.3
Do not know	34	20.5
Knowing Source of Blood Supply		
Yes	164	98.8
No	2	1.2
Sources of Blood Supply (n=164)		*Multiple response
Voluntary blood donors	164	100.0
Family donors	115	70.1
Paid donors	65	39.6
Blood bank	130	79.3
Others	3	1.8

Table (5.10) Knowledge of blood donors about eligible criteria

Knowledge	Frequency	Percentage
Eligible Age for Blood Donation		
16 - 60 years	11	6.6
18 - 60 years	133	80.1
18 - 65 years	11	6.6
Do not know	11	6.6
Eligible Minimum Weight for Blood Donation		
100 lb for both sex	33	19.9
110 lb for both sex	52	31.3
100 lb for women and 110 lb for men	64	38.6
Do not know	17	10.2
Eligible BP for Blood Donation		
100/60 mmHg -150/90 mm Hg	13	7.8
110/60 mmHg -150/90 mm Hg	28	16.9
100/60 mmHg -140/90mm Hg	75	45.2
Do not know	49	29.5
Other	1	0.6
Eligible Hb% for Blood Donation		
Not less than 11.5 g%	6	3.6
Not less than 12.5 g%	8	4.8
Not less than 15.5 g%	1	0.6
Do not know	151	91.0

By accessing knowledge of blood donors, most of donors (71.1%) knew that common blood groups and among them, most (80.5%) could mention all 4 blood groups. Only a few (4%) could not know self-blood group. All respondents had ever heard about blood donation. Most respondents (85.5%) told that they received information of blood donation from voluntary blood donors. Almost all respondents (98.8%) knew sources of blood supply but among them, minority (20.7%) denied that blood bank was not a source of blood supply (Table 5.9). Regarding eligible criteria, eligible age, minimum weight and blood pressure were known by most blood donors, (80.1%), (38.6%) and (45.2%) respectively. However, eligible haemoglobin percent was not known by most of them (91%) (Table 5.10).

Table (5.11) Knowledge of blood donors about process of blood donation

Knowledge	Frequency	Percentage
What volume of blood can a person donate during each donation?		
Less than 500 ml	70	42.2
500 – 1000 ml	26	15.7
Do not know	70	42.2
What is the duration of a donation process?		
Less than 20 minutes	110	66.3
20 – 60 minutes	41	24.7
Do not know	15	9.0
How often can an individual donate blood in a year?		
2 times	20	12.0
3 times	121	72.9
4 times	12	7.2
Do not know	13	7.8
Time taken for blood volume to be replaced after a single donation		
Within 24 hours	26	15.7
24-36 hours	35	21.1
2-3 weeks	24	14.5
3-4 months	50	30.1
Do not know	31	18.7

Table (5.12) Knowledge of blood donors about deferral criteria

Deferral Criteria	Yes	No	Don't know
	Frequency (%)	Frequency (%)	Frequency (%)
Can one donate blood during fever?	1 (0.6)	163 (98.2)	2 (1.2)
Can a donation be done by a person who is receiving blood transfusion within previous one year?	20 (12.0)	123 (74.1)	23 (13.9)
Can a person having allergy donate blood?	3 (1.8)	155 (93.4)	8 (4.8)
Can a smoker donate blood?	101 (60.8)	54 (32.5)	11 (6.6)
Can a person with chronic alcoholism donate blood?	18 (10.8)	54 (32.5)	11 (6.6)
Can people who are known HIV positive donate blood?	0 (0.0)	166 (100.0)	0 (0.0)
Can people with Hepatitis donate blood?	2 (1.2)	163 (98.2)	1 (0.6)

Table (5.13) Knowledge about Transfusion Transmitted Infections

Knowledge	Frequency	Percentage
Does regular voluntary blood donation have medical benefits?		
Yes	143	86.1
No	13	7.8
Do not know	10	6.0
Can a person be infected by receiving blood transfusion?		
Yes	120	72.3
No	38	22.9
Do not know	8	4.8
What diseases are transmissible by blood transfusion? (n=120)	*Multiple response	
HIV	118	98.3
HBV	101	84.2
HCV	95	79.2
Syphilis	89	74.2
Malaria	83	69.2
Others	3	2.5

Regarding deferral criteria, all respondent could tell that HIV positive cannot donate blood. Minority of blood donors (27.7%) could not know about transfusion transmitted infections (Table 5.12 and 5.13).

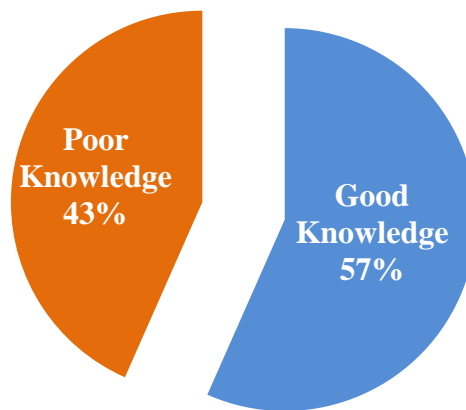


Figure (5.4) Knowledge level among blood donors

Among all the respondents, there were 94 blood donors with good knowledge level and 72 blood donors with poor knowledge level. So, blood donors with good knowledge level were more than that with poor knowledge level by 14% (Figure 5.4).

5.4. Attitude of blood donors towards Blood Donation

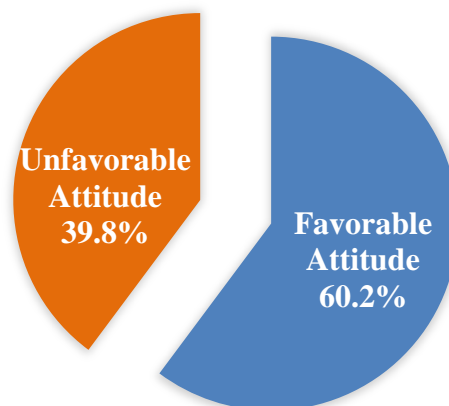


Figure (5.5) Attitude towards blood donation among blood donors

Among all the respondents, there were 100 blood donors with favorable attitude and 66 blood donors with unfavorable attitude. So, blood donors with favorable attitude were more than that with unfavorable attitude by 20.4% (Figure 5.5).

Table (5.14) Attitude towards blood donation

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Statements	Freq (%)	Freq (%)	Freq (%)	Freq (%)	Freq (%)
Blood donation is a noble meritorious conduct.	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.6)	165 (99.4)
All blood donors are voluntary blood donors.	3 (1.8)	0 (0.0)	7 (4.2)	26 (15.7)	130 (78.3)
There is a need to give incentives to those who donate blood.	142 (85.5)	4 (2.4)	4 (2.4)	1 (0.6)	15 (9.0)
There is a need to give cost (travel cost, food cost) to those who donate blood.	95 (57.2)	2 (1.2)	20 (12.0)	13 (7.8)	36 (21.7)
Due to blood donation, blood donors cannot be harmed.	6 (3.6)	3 (1.8)	5 (3.0)	1 (0.6)	69 (41.6)
Blood donors should donate blood only when a patient request to donate.	85 (51.2)	5 (3.0)	6 (3.6)	1 (0.6)	69 (41.6)
Donating blood lower donor's immunity.	100 (60.2)	4 (2.4)	10 (6.0)	10 (6.0)	42 (25.3)
Blood donation makes donors weak.	95 (57.2)	7 (4.2)	6 (3.6)	18 (10.8)	40 (24.1)
Blood donation may lead to anemia.	85 (51.2)	4 (2.4)	12 (7.2)	21 (12.7)	44 (26.5)
Willing to donate blood in the future.	0 (0.0)	0 (0.0)	2 (1.2)	0 (0.0)	164 (98.8)
Encourage relatives to donate.	3 (1.8)	1 (0.6)	4 (2.4)	2 (1.2)	156 (94.0)

Most blood donors assumed that there is no need to give incentives (85.5%) and cost (57.2%) to those who donate blood. Nearly half of blood donors (41.6%) thought that blood donors should donate blood only when they were requested by patients to donate. Almost all donors had willingness to donate blood in future and encourage relatives to donate, (98.8%) and (94%), respectively (Table 5.14).

5.5. Blood donation practice of blood donors

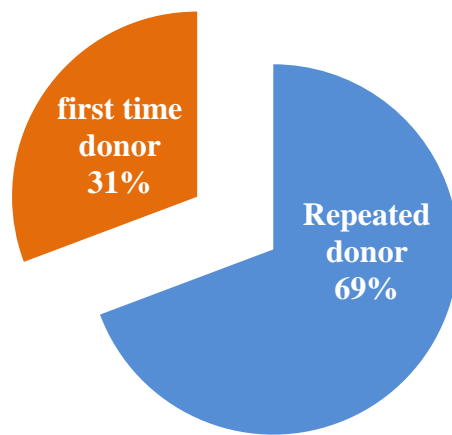


Figure (5.6) Number of type of blood donors by donation time

Among all the respondents, there were 115 repeated blood donors (69%) and 51 first time blood donors (31%). So, repeated donors were more than new (first time) donors by 38% (Figure 5.6).

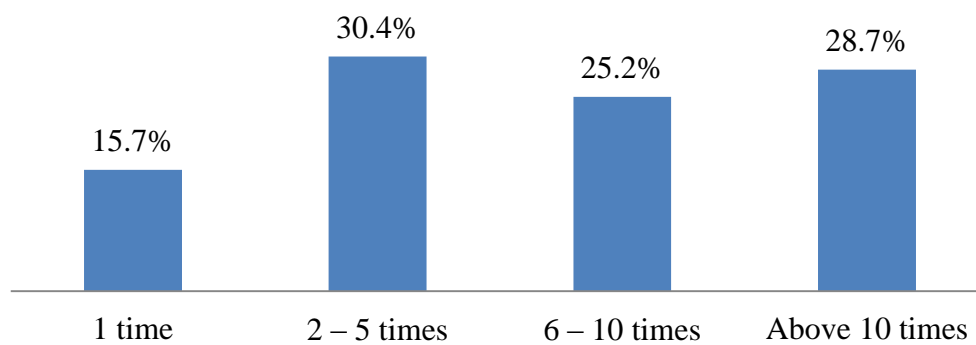


Figure (5.7) Donation times of blood donors

There were 18 first time donors (15.7%), 35 blood donors with 2 to 5 times (30.4%), 29 blood donors with 6 to 10 times (25.2%) and 33 blood donors with above 10times (28.7%). So, donation times of 2 to 5 times were the commonest (Figure 5.7).

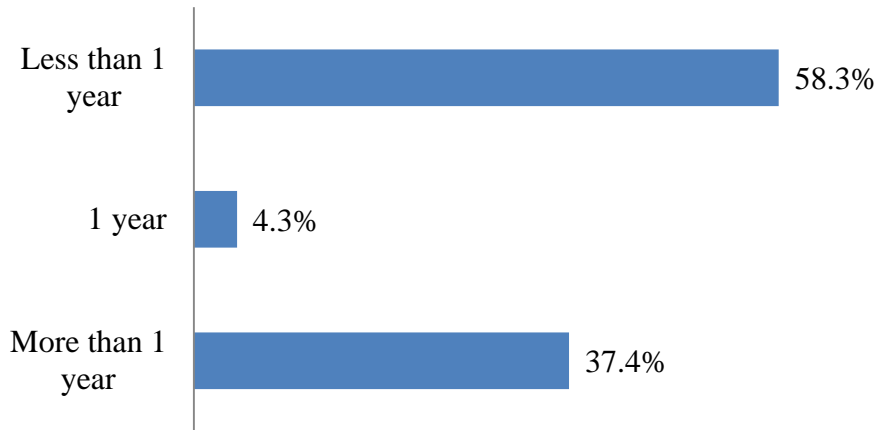


Figure (5.8) Duration between last time of blood donation of blood donors

There were 43 blood donors with more than 1 year duration interval (37.4%), 5 blood donors with 1 year duration interval (4.3%) and 67 blood donors with less than 1 year duration interval (58.3%). So, duration interval less than 1 year was the commonest among all the respondents (Figure 5.8).

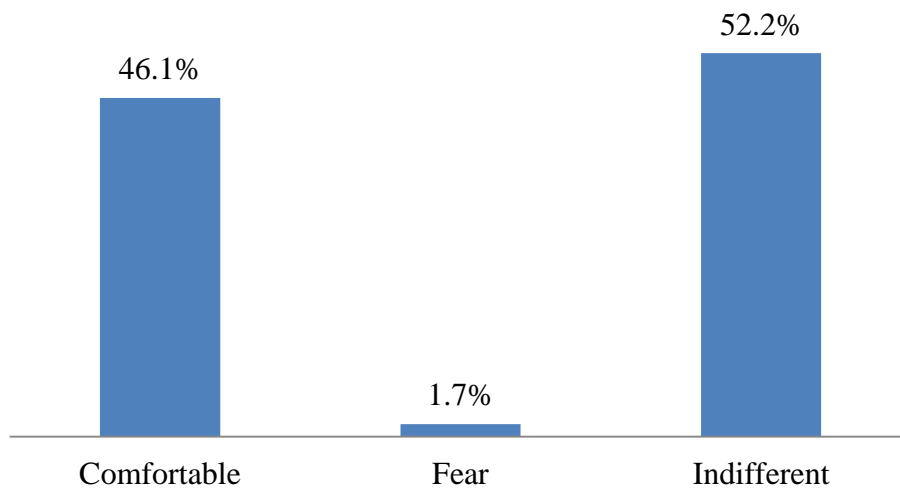


Figure (5.9) Feeling after donation of blood donors

Among all blood donors, there were 46.1% of blood donors felt comfortable, 52.2% of blood donors had no special feeling and only 1.7% of blood donors with fear after blood donation (Figure 5.9).

All respondents have willingness to donate blood if being asked or reminded to do so.

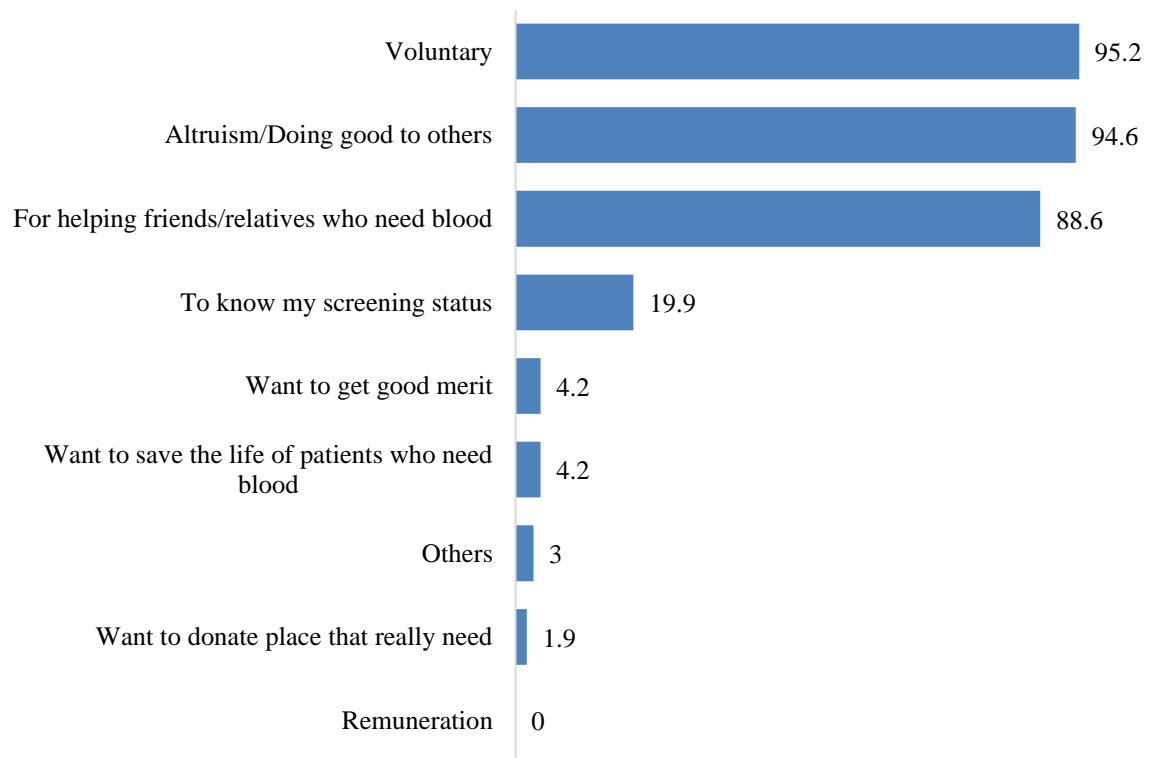


Figure (5.10) Reasons for blood donation of blood donors

The commonest reason for blood donation was voluntary (95.2%). All respondents did not donate blood for remuneration (Figure 5.10)

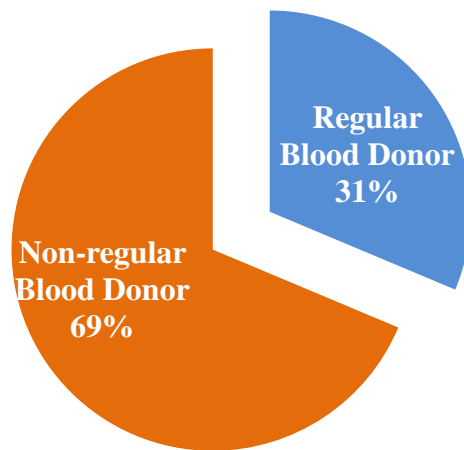


Figure (5.11) Type of blood donation practice of blood donors

Among all donors, there were 52 blood donors with regular donation practice (31%) and 114 blood donors with non-regular donation practice (69%). Non-regular blood donors were two times more common than regular blood donors (Figure 5.11).

Table (5.15) Motivators on regular blood donation of blood donors (n=52)

Motivators for regular blood donation are (*Multiple response) (n=52)	Frequency	Percentage
It is important to help other people	49	94.2
I feel great compassion towards the receivers of blood products	48	92.3
I get a good feeling whenever I see the blood bank logo, or an advertisement for blood donation	42	80.8
Blood donation is primarily a moral duty	39	75.0
Donation of blood makes me feel needed	38	73.1
I think blood donation benefits my own health	37	71.2
By donating blood I can explore my own strengths	27	51.9
Blood donation is a cause that is important to me	21	40.4
For donation is that I get a health check for free	12	23.1
Having compassion for patients	3	5.8
Want to get good merit	2	3.8
As a member of blood donation group	2	3.8
Others	6	11.5

The commonest motivator for regular blood donation was to help other people (94.2%) (Table 5.15).

Table (5.16) Deterrents on regular blood donation of blood donors (n=116)

Reasons for not donating blood regularly(*Multiple response) (n=114)	Frequency	Percentage
Busyness	27	23.7
Only donate blood when meet directly with patient	23	20.2
Not being asked to donate blood previously	20	17.5
Due to various circumstances and situations	11	9.6
Far from a blood bank	7	6.1
Fear of needle pricks	4	3.5
Blood donation is time consuming	3	2.6
Need to donate for friends or relatives in future	3	2.6
Ignorance of information of blood donation previously	3	2.6
Not knowing self-blood grouping	2	1.8
Blood donation causes weakness and fainting	2	1.8
Parents do not allowed	2	1.8
Fear of being rejected as a donor	2	1.8
Not eligible to donate	2	1.8
Others	14	12.3

The commonest deterrent was busyness (23.7%). About one-fifth of non-regular donors wanted to donate blood only when they directly meet patients who need blood. Other reasons for not donating regularly included one strange deterrent. Only one irregular blood donor told that filling of donors' deferral form was difficult for him and suggested that blood bank should have staffs to help in filling donors' deferral forms (Table 5.16).

Table (5.17) Deterrents on blood donation among people (n=166)

Deterrents	Frequency	Percentage
Fear of fainting/ weak	69	41.6
Fear of being tested for infectious disease	66	39.8
Ignorance of information on blood donation	65	39.2
Not approached to donate	54	32.5
They thought that donated blood may be sold	39	23.5
Fear of contracting infectious diseases	38	22.9
Fear of not having enough blood	37	22.3
The fear of needle pricks	30	18.1
Because of being unhealthy	16	9.6
Fear of being damage to good health	10	6.0
Busyness	5	3.0
Due to various circumstances and situations	2	1.2
Lack of self confidence	2	1.2
No altruism	2	1.2
Others	13	7.8

Most respondents assumed that some people are not willing to donate blood because of fear of fainting or weakness. The second commonest reason they assumed was that fear of being tested for infectious diseases and the third reason was ignorance of information on blood donation (Table 5.17).

5.6. Suggestions of blood donors

Table (5.18) Blood donors' suggestions for future/ Improvements of blood bank services (n=166)

Improvements of blood bank services (*Multiple response)	Frequency	Percentage
To carry out educational campaigns on importance and benefits of blood donation (at not only hospitals but also workplaces/ schools/ universities/ up to grass-root level)	158	95.2
To make blood bank services in accessible and available for 24 hours	152	91.6
To have staffs who are skillful in both technical and communication	142	85.5
To make blood banks clean and nice places	135	81.3
To put up advertisement on TV, Radio, Website about blood donation	131	78.9
To assure donors of maximum confidentiality after blood samples are tested	93	56.0
To pay the cost of blood donation (travel cost, food cost) to blood donors	42	25.3
To encourage people to donate blood by blood donors	28	16.9
To give incentives (a recognized card/ present/ money) to blood donors	11	6.6
To make blood bank having good service to blood donors	10	6.0
To conduct mass blood donation ceremony (at pagoda/ at office/ up to grass-root level)	4	2.4
To make reminder phone call to blood donors	3	1.8
To make the functions of blood bank being clear and correct	2	1.2
Others	8	4.8

Almost all respondents suggested that educational campaigns should be carried out on importance and benefits of blood donation at not only hospitals but also workplaces/ schools/ universities/ up to grass-root level. Blood donation services should be accessible and available 24 hour (Table 5.18).

5.7. Association of knowledge, attitude and practice of blood donor

Table (5.19) Factors associated with knowledge of blood donors

Variables	Good Knowledge	Poor Knowledge	<i>P</i> value
Age	Frequency (%)	Frequency (%)	
18 – 25	30 (60.0)	20 (40.0)	0.832
26 – 35	35 (54.7)	29 (45.3)	
36 – 45	23 (53.5)	20 (46.5)	
46 – 60	6 (66.7)	3 (33.3)	
Sex			
Male	62 (54.4)	52 (45.6)	0.388
Female	32 (61.5)	20 (38.5)	
Religion			
Buddhist	90 (57.7)	66 (42.3)	0.333 [†]
Others	4 (40.0)	6 (60.0)	
Ethnic group			
Bamar	74 (53.6)	64 (46.4)	0.083
Others	20 (71.4)	8 (28.6)	
Marital status			
Single	50 (58.8)	35 (41.2)	0.520 [†]
Married	42 (56.0)	33 (44.0)	
Divorced/Separated/ Widower / Widow	2 (33.3)	4(66.7)	
Educational level			
Primary school level	6 (33.3)	12 (66.7)	<0.001 ^{***}
High school level	37 (45.7)	44 (54.3)	
Graduate level and above	51 (76.1)	16 (23.9)	
Residence by District			
East District	20 (50.0)	20 (50.0)	0.055
West District	45 (65.2)	24 (34.8)	
South District	11 (37.9)	18 (62.1)	
North District	18 (64.3)	10 (35.7)	
Residence by Urban/Rural			
Urban	83 (57.2)	62 (42.8)	0.674
Rural	11 (52.4)	10 (47.6)	

[†]Fisher exact, ** Statistically significant, *** Statistically strongly significant

Table (5.19) Factors associated with knowledge of blood donors (Cont.)

Variables	Good Knowledge	Poor Knowledge	<i>P</i> value
Occupation	Frequency (%)	Frequency (%)	
Dependent / Un-employee/ Housewives/ Students/ Monks	28 (54.9)	23 (45.1)	0.193
Government Employee	5 (83.3)	1 (16.7)	
Company Employee	27 (65.9)	14 (34.1)	
Self-Employee	30 (53.6)	26 (46.4)	
Others	4 (33.3)	8 (66.7)	
Type of blood donor			
Non-remunerated voluntary donors	57 (61.3)	36 (38.7)	0.171
Replacement donors	37 (50.7)	36 (49.3)	
New (First time) donor	22 (43.1)	29 (56.9)	0.020**
Repeated donor	72 (62.6)	43 (37.4)	
Donation times			
1 time	11 (61.1)	7 (38.9)	0.831
2 – 5 times	22 (62.9)	13 (37.1)	
6 – 10 times	20 (69.0)	9 (31.0)	
Above 10 times	19 (57.6)	14 (42.4)	

†Fisher exact, ** Statistically significant, *** Statistically strongly significant

Regarding association with knowledge about blood donation, high educational level of blood donors was statistically strongly significant with good knowledge level. It was also significantly found that repeated donors had better knowledge level than first time donors. Non-remunerated voluntary donors had better knowledge level than replacement donors but that was not statistically significant (Table 5.19).

Table (5.20) Factors associated with attitude of blood donors

Variables	Favorable Attitude	Unfavorable Attitude	<i>P</i> value
Age	Frequency (%)	Frequency (%)	
18 – 25	21 (42.0)	29 (58.0)	0.007**
26 – 35	41 (64.1)	23 (35.9)	
36 – 45	30 (69.8)	13 (30.2)	
46 – 60	8 (88.9)	1 (11.1)	
Sex			
Male	64 (56.1)	50 (43.9)	0.110
Female	36 (69.2)	16 (30.8)	
Religion			
Buddhist	93 (59.6)	63 (40.4)	0.741 [†]
Others	7 (70.0)	3 (30.0)	
Ethnic group			
Bamar	86 (62.3)	52 (37.7)	0.225
Others	14 (50.0)	14 (50.0)	
Marital status			
Single	48 (56.5)	37 (43.5)	0.629 [†]
Married	48 (64.0)	27 (36.0)	
Divorced/Separated/ Widower / Widow	4 (66.7)	2 (33.3)	
Educational level			
Primary school level	7 (38.9)	11 (61.1)	0.037**
High school level	46 (56.8)	35 (43.2)	
Graduate level and above	47 (70.1)	20 (29.9)	
Residence by District			
East District	30 (75.0)	10 (25.0)	0.083
West District	40 (58.0)	29 (42.0)	
South District	13 (44.8)	16 (55.2)	
North District	17 (60.7)	11 (39.3)	
Residence by Urban/Rural			
Urban	90 (62.1)	55 (37.9)	0.206
Rural	10 (47.6)	11 (52.4)	

[†]Fisher exact, ** Statistically significant, *** Statistically strongly significant

Table (5.20) Factors associated with attitude of blood donors (Cont.)

Variables	Favorable Attitude	Unfavorable Attitude	<i>P</i> value
Occupation	Frequency (%)	Frequency (%)	
Dependent / Un-employee/ Housewives/ Students/ Monks	29 (56.9)	22 (43.1)	0.561
Government Employee	4 (66.7)	2 (33.3)	
Company Employee	29 (70.7)	12 (29.3)	
Self-Employee	32 (57.1)	24 (42.9)	
Others	6 (50.0)	6 (50.0)	
Type of blood donor			
Non-remunerated voluntary donors	54 (58.1)	39 (41.9)	0.518
Replacement donors	46 (63.0)	27 (37.0)	
New (First time) donor	20 (39.2)	31 (60.8)	<0.001***
Repeated donor	80 (69.6)	35 (30.4)	
Donation times			
1 time	10 (55.6)	8 (44.4)	0.175
2 – 5 times	22 (62.9)	13 (37.1)	
6 – 10 times	24 (82.8)	5 (17.2)	
Above 10 times	24 (72.7)	9 (27.3)	
Feeling after donation			
Comfortable	40 (75.5)	13 (24.5)	0.327
Fear	1 (50.0)	1 (50.0)	
Indifferent	39 (65.0)	21 (35.0)	

†Fisher exact, ** Statistically significant, *** Statistically strongly significant

Regarding association with attitude towards blood donation, older age of blood donors was statistically significantly associated with favorable attitude on blood donation. Higher educational level was also significantly associated with favorable attitude. Repeated donors had more favorable attitude on blood donation than first time donors and that association was statistically strongly significant. Non-remunerated voluntary donors had more favorable attitude than replacement donors but that association was not statistically significant (Table 5.20).

Table (5.21) Factors associated with donation practice of blood donors

Variables	Regular voluntary donor	Non-Regular voluntary donor	<i>P</i> value
Age	Frequency (%)	Frequency (%)	
18 – 25	8 (16.0)	42 (84.0)	0.040**
26 – 35	23 (35.9)	41 (64.1)	
36 – 45	18 (41.9)	25 (58.1)	
46 – 60	3 (33.3)	6 (66.7)	
Sex			
Male	37 (32.5)	77 (67.5)	0.642
Female	15 (28.8)	37 (71.2)	
Religion			
Buddhist	51 (32.7)	105 (67.3)	0.174 [†]
Others	1 (10.0)	9 (90.0)	
Ethnic group			
Bamar	44 (31.9)	94 (68.1)	0.730
Others	8 (28.6)	20 (71.4)	
Marital status			
Single	28 (32.9)	57 (67.1)	0.911 [†]
Married	22 (29.3)	53 (70.7)	
Divorced/Separated/ Widower / Widow	2 (33.3)	4 (66.7)	
Educational level			
Primary school level	4 (22.2)	14 (77.8)	0.056
High school level	20 (24.7)	61 (75.3)	
Graduate level and above	28 (41.8)	39 (58.2)	
Residence by District			
East District	16 (40.0)	24 (60.0)	0.398
West District	21 (30.4)	48 (69.6)	
South District	6 (20.7)	23 (79.3)	
North District	9 (32.1)	19 (67.9)	
Residence by Urban/Rural			
Urban	49 (33.8)	96 (66.2)	0.072
Rural	3 (14.3)	18 (85.7)	

[†]Fisher exact, ** Statistically significant, *** Statistically strongly significant

Table (5.21) Factors associated with donation practice of blood donors (Cont.)

Variables	Regular voluntary donor	Non-Regular voluntary donor	<i>P</i> value
Occupation	Frequency (%)	Frequency (%)	
Dependent / Un-employee/ Housewives/ Students/ Monks	11 (21.6)	40 (78.4)	0.317 [†]
Government Employee	3 (50.0)	3 (50.0)	
Company Employee	15 (36.6)	26 (63.4)	
Self-Employee	20 (35.7)	36 (64.3)	
Others	3 (25.0)	9 (75.0)	
Type of blood group	No. (%)	No. (%)	
Blood group A	6 (18.2)	27 (81.8)	0.302
Blood group B	17 (37.0)	29 (63.0)	
Blood group AB	6 (37.5)	10 (62.5)	
Blood group O	23 (32.4)	48 (67.6)	
Type of blood donor			
Non-remunerated voluntary donors	32 (34.4)	61 (65.6)	0.334
Replacement donors	20 (27.4)	53 (72.6)	
First time donor	0 (0.0)	51 (100.0)	<0.001 ^{***}
Repeated donor	52 (45.2)	63 (54.8)	
Donation times			
1 time	0 (0.0)	18 (100.0)	<0.001 ^{***}
2 – 5 times	12 (34.3)	23 (65.7)	
6 – 10 times	15 (51.7)	14 (48.3)	
Above 10 times	25 (75.8)	8 (24.2)	
Feeling after donation			
Comfortable	27 (50.9)	26 (49.1)	0.339 [†]
Fear	0 (0.0)	2 (100.0)	
Indifferent	25 (41.7)	35 (58.3)	

[†]Fisher exact, ** Statistically significant, *** Statistically strongly significant

Regarding association with practice of blood donation, it was observed that the older age of blood donors, the more regular practice on blood donation and the finding was statistically significant. Regular donors were associated with increasing in age group and number of donation times of blood donors. These associations were

statistically strongly significant. It was observed that the higher the educational level of blood donors, the more regular practice on blood donation but that finding was not statistically significant. Non-remunerated voluntary donors had more regular practice on blood donation than replacement donors but that association was not statistically significant (Table 5.21).

Table (5.22) Association of knowledge with donation practice of blood donors

Variables	Good Knowledge	Poor Knowledge	<i>P</i> value
Type of Blood Donation Practice	Frequency (%)	Frequency (%)	
Regular voluntary donor	32 (61.5)	20 (38.5)	0.388
Non-regular voluntary donor	62 (54.4)	52 (45.6)	

Among regular voluntary donors, 61.5% had good knowledge about blood donation and it was 54.4% among non-regular donors. There was no statistically significant association (Table 5.22).

Table (5.23) Association of attitude with donation practice of blood donors

Variables	Favorable Attitude	Unfavorable Attitude	<i>P</i> value
Type of Blood Donation Practice	Frequency (%)	Frequency (%)	
Regular voluntary donor	40 (76.9)	12 (23.1)	0.003**
Non-regular voluntary donor	60 (52.6)	54 (47.4)	

** Statistically significant,

Voluntary donors with favorable attitude were about three times higher than that of unfavorable attitude on blood donation. That association was statistically significant (Table 5.23).

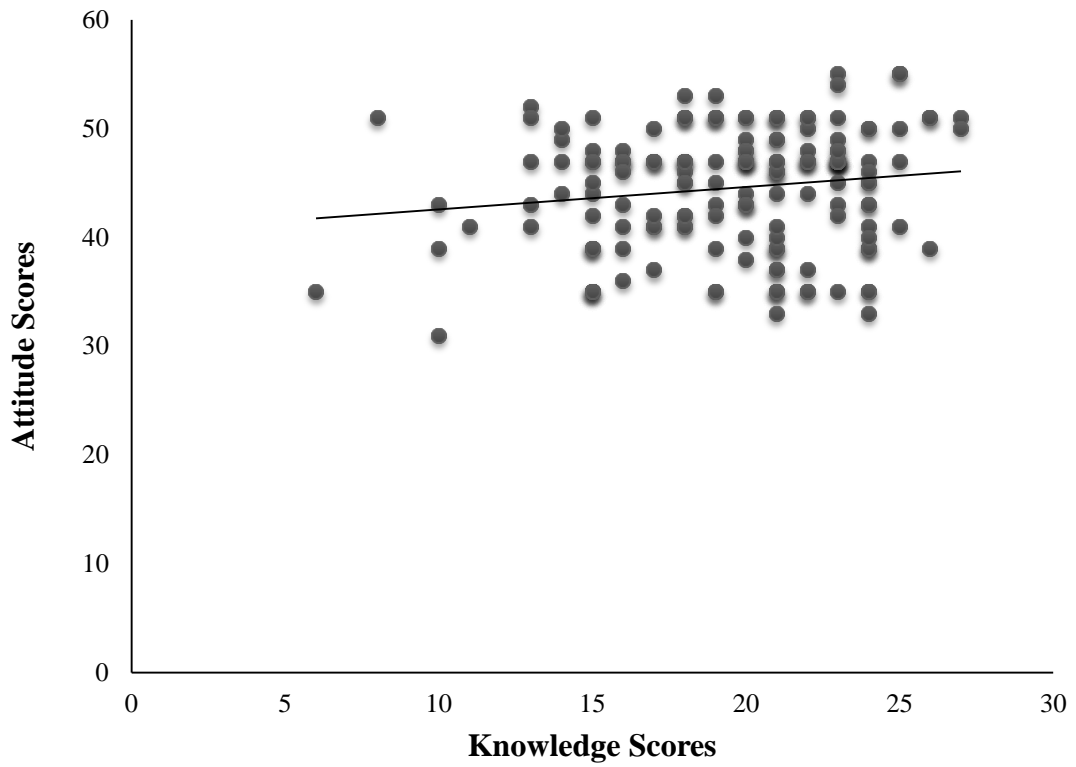


Figure (5.12) Correlation between knowledge score and attitude score of blood donors

Knowledge score and attitude score were positively associated. (R^2 linear =0.022, $F= 3.696$, P value=0.056). The association was not statistically significant (figure 5.12).

5.8. Qualitative findings

In-depth interviews (IDIs) were done for exploring the experiences and challenges of blood donation among blood donors at Central Women’s Hospital (Yangon).

Table (5.24) Characteristics of respondents of in-depth interview

No	Age (Years)	Sex	Educational Level	Occupation	Blood group	Types of Donor
1	32	Male	BA. (English)	Self- Employed	A	Regular Voluntary
2	48	Male	Middle School	Self- Employed	A	Regular Voluntary
3	24	Female	B.Tech (E.C)	Company-Employee	AB	Regular Replacement
4	31	Male	BSc (Chemistry)	Self- Employed	AB	Non-regular Replacement
5	22	Female	First year	Company-Employee	A	Non-regular Voluntary
6	30	Male	Damma Sa Ri Ya Graduated	Monk	O	Non-regular Replacement

In-depth interview to six blood donors were done. There were three blood donors with regular donation practice and three blood donors with non-regular donation practice. There were three voluntary donors and three replacement donors. Majority of respondents were men and only two were women. Respondents reported various educational levels and also reported various occupations.

A total of eight themes were identified from in-depth interviews. They were

1. Perceptions about blood donation
2. Experiences – first experience, different experiences
3. Donors’ eligibility criteria for blood donation
4. Sources of information for blood donation

5. Challenges of blood donation– barriers of blood donation, service, mis-use of blood, health-related difficulties
6. Suggestions for more blood donors who donate regularly
7. Reason for regular/ non-regular
8. Future plan

5.8.1. Perception about blood donation

All respondents stated that blood donation is a noble meritorious conduct. Half of respondents told that blood donation is good for two sides (both donor’s side and recipient’s side).

“သွေးလှူတာ ကောင်းတယ် ကောင်းတဲ့ အကြောင်းတွေပေါ့။ မွန်မြတ်တဲ့ အလုပ်တွေပေါ့နော် အဲလိုမျိုး ကိုယ့်အတွက် လည်းအကျိုးရှိတယ် သူများအတွက်လည်း အကျိုးရှိတာပေါ့ နှစ်ဦးနှစ်ဖက်လုံး အဲလိုအကျိုးရှိတဲ့ အတွက်ကြောင့် သွေးလှူတာဟာ ကောင်းပါတယ်လို့ ဦးဇင်းက ဖြည့်စွက်ပြောချင်ပါတယ်”

“I want to complement that blood donation is good. It has good effects and is a noble act because blood donation gives mutual benefits for both blood donor and recipient (me and others).”

(30 years, graduated, replacement non-regular monk donor)

“သွေးလှူဒါန်းတယ် ဆိုတာ သူတစ်ပါးက လိုအပ်နေလို့ ကိုယ်က ကူညီတာ။ သွေးလှူတာ ကောင်းပါတယ်။ ဘာလို့လဲဆိုတော့ ကိုယ့်ကြောင့် သူများ အသက်ရှင်တာပေါ့”

“Blood donation is one act of helping others who was needed. Blood donation is good because I can save others’ lives”

(22years, University student, voluntary non-regular female donor)

5.8.2. Experiences

(A) First Experience

Half of respondents told that they felt excited and frightened before they donate first time. One-third of donors felt appreciated and satisfied after blood donation. Only one respondent donated blood due to persuading by her friends and another one donated blood due to her mother being a regular blood donor.

“ပထမတော့ စလှူတုန်းကတော့ ကြောက်တာပေါ့နော်၊ ကျွန်တော်က ဆေးထိုးအပ်ကို ကြောက်တယ်။ ဒါပေမယ့်လှူမယ်ဆိုတဲ့ စိတ်ကရှိတော့ လှူလိုက်တယ်။”

“I am afraid of needle prick, so I was anxious about blood donation at the first time, but I donated blood due to my strong desire to donate.”

(32years, graduated, voluntary regular male donor)

“ဦးဇင်းကတော့ ဟိုဟာပေါ့ နည်းနည်းတော့ စိတ်လှုပ်ရှားတာပေါ့ စလှူရတာလေ။ တစ်ခါမှ မလှူဘူးတော့လေ စလှူတုန်းက စိတ်လှုပ်ရှားတယ်”

“As for me, I was excited a little when I first donated blood because I had never donated blood before. I felt excited at my first time of blood donation.”

(30 years, graduated, replacement non-regular monk donor)

“သူငယ်ချင်းတွေက သွေးသွားလှူမယ် လိုက်မလားဆိုတော့ ကိုယ်ကလည်း တစ်ခါမှမလှူဖူးဘူး ဆိုတော့ လိုက်မယ်ဆိုပြီး သွေးလှူဖြစ်တာ။ သွေးလှူဘဏ်မှာ သွေးလှူဖြစ်တာ။ အဲဒီတုန်းက ခံစားရတာတော့ ပီတိဖြစ်တယ်။”

“My friends told me that they were going to donate blood and asked me whether I would follow them. Then I followed them and donated blood at National Blood Centre. At that time, I felt elated.”

(22years, university student, voluntary non-regular female donor)

(B) Different Experiences

Two-third of respondents described that blood donation is very difficult at first time but it is much easier at repeated times. If one can donate first time, he or she feels satisfied and comfort and wants to donate another time.

“နောက်ဆိုတစ်ခါ လှူပြီးသွားတာနဲ့ လှူချင်စိတ်ပိုပေါက်လာတာ တစ်ခါလှူပြီးသွားတာနဲ့လေ ကိုယ်ဘာမှ မဖြစ်တော့ဘူး၊ မနာတော့ဘူးဆို တော့လေ”

“The desire to donate blood was increased in next times after the first time because I felt nothing and no pain.”

(30 years, graduated, replacement non-regular monk donor)

Only one donor told that he had experience of itchiness due to viscous blood before donation at his donation time of 7 to 10 times.

“သွေးပျစ်လာရင် ယားလာတယ်၊ သွေးပျစ်လာရင် ဒီလက်ပျဉ်မှာ အရဲတွေထနေတယ်။ လှူပြီးသွားရင် ဘာမှမဖြစ်တော့ဘူး။ မလှူခင်မှာ သွေးပျစ်လာတယ်။ (၇)ကြိမ် (၁၀) ကြိမ်လောက်တုန်းက အဲ့လိုဖြစ်တယ်။ နောက်အကြိမ် အရမ်းများလာတော့လည်း မဖြစ်တော့ဘူး။”

“I became itchy when my blood was viscous. The urticarial rash appeared on my forearm when my blood was viscous. These symptoms appeared before blood donation and disappeared after donation. That was my experience in 7th to 10th times of blood donation but that was not occurred in next more times.”

(32years, graduated, voluntary regular male donor)

5.8.3. Donors’ eligibility criteria for blood donation

All respondents could not describe donors’ eligibility criteria completely. One third of respondents told that blood donors should take good sleep and should avoid smoking and drinking alcohol.

“သွေးလှူရှင်ရဲ့ လိုအပ်ချက် ပြည့်မီအောင် ဆိုရင် အဲ့ဒါတော့ ကျွန်တော် သေချာမသိဘူး။ သွေးပေါင်ချိန် ပြည့်ဖို့ လိုမယ်၊ အိပ်ရေးဝအောင် အိပ်ဖို့ လိုမယ် ထင်တယ်။”

“I don’t exactly know about the requirements of blood donors. I think that blood donors are needed to have normal blood pressure and to sleep soundly.”

(31years, graduated, replacement non-regular male donor)

5.8.4. Sources of information about blood donation

(A) Multi-media such as television, radio, social media

Two-third of respondents suggested that information should be distributed by multi-media such as television, radio and social media.

“ညီမစိတ်ထင်တော့ ဆေးရုံကို လာတဲ့သူပဲ မဟုတ်ပဲ အကုန်လုံးသိအောင် Social Media က ကြေငြာပေးတာပဲ ဖြစ်ဖြစ် အဲ့လိုမျိုးလေး လုပ်ပေးရင်တော့ ပိုပြီးတော့ အဆင်ပြေမယ်လို့ ထင်တယ် အသိပညာပေးပေးပေါ့နော်၊ အဲ့လို အများသူငါ သွားနေတဲ့ကားတွေပေါ် ဖြစ်ဖြစ်ပေါ့နော် အဲ့လိုမျိုးလေး.....”

“I think that health education about blood donation should be promoted not only attendances to the hospital but also all other people by advertising in social media. I think that is more convenient such as advertisements on public transport (bus)...”

(24years, graduated, replacement regular female donor)

“facebook မှာ တင်လိုက်ရင် လူတော်တော် များများတော့ သိနေလောက်ပြီပေါ့နော်။ နောက် radio လေးပေါ့၊ အဲဒါလေးကတော့ အဆင်ပြေတယ်။ အဲဒီ(၂)ခုကတော့ အသုံးများတယ်၊ ခေတ်လည်းမီတယ် အဲကနေ သွားကြတာများတယ်။ facebook နဲ့ radio ကနေ ဆို သင့်တော်မယ် ထင်တယ်။”

“Most people have known information by sharing on facebook and then by radio. These are convenient. These two channels are popular and modern. These are mostly used. So, I think facebook and radio are appropriate for sharing information”

(31years, graduated, replacement non-regular male donor)

(B) Social connection

One respondent told that she got information about blood donation from her friends. One respondent told that she got information about blood donation from her mother, a regular blood donor.

“သမီးတုန်းကတော့ သူငယ်ချင်းတွေက တဆင့်သိတာ”

“As for me, I got that information from friends”

(22years, University student, voluntary non-regular female donor)

“သွေးစပြီး လှူဖြစ်တာက ညီမ မေမေ လှူလို့ပေါ့နော်၊ မေမေလှူတော့ ညီမလည်း နောက်ကနေ လှူမယ်ဆို ပြီးတော့ အဲ့ဒီမှာ စပြီး လှူဖြစ်တယ်။”

“I firstly donated blood because of my mother’s blood donation. As my mother donates blood, I follow her and started to donate blood.”

(24years, graduated, replacement regular female donor)

(C) Hospitals/ Clinics

Only one donor heard about blood donation from hospital. Only one respondent told that information about blood donation should be expanded by doctors and from hospitals.

“ဆေးရုံတွေကလည်း ကြားဖူးတယ်။”

“I heard information also from hospital.”

(22years, University attended, voluntary non-regular female donor)

“အဓိက ကတော့ ဆေးရုံက ဆရာဝန် ညွှန်ကြားချက်ပေါ့နော် အဲလိုမျိုး ဆရာဝန်တွေ ညွှန်တဲ့အတိုင်း လိုက်နာမယ် ကျန်းမာရေးနဲ့ ပတ်သက်ပြီးပေါ့နော် လှူသင့်တာကို တိုက်တွန်းပြီးတော့ ပြောပြသင့်တာ ပေါ့။”

“The main thing is instructions by doctors at hospital. We should follow these instructions concerning health. So, doctors should encourage people to donate blood.”

(30 years, graduated, replacement non-regular monk donor)

5.8.5. Challenges of blood donation

(A) Barriers of blood donation

Two-third of respondents stated that the reason of some people do not donate blood was due to ignorance of information on blood donation and not being approached to donate blood. Another common barrier was due to fear of needle pricks. One respondent described that some people frightened for damaging their health by blood donation. Another one blood donor told that he had not donated blood at Shwedagon Pagoda Blood Centre because no one welcome to him at that time.

“ညီမ စိတ်ထင်တော့ တစ်ချို့တွေကျတော့ သွေးလှူဒါန်းတဲ့နေရာကို သိပ်မသိကြဘူး၊ လှူလို့ရတယ် ဆိုတာတွေ ဘာတွေလည်း သိပ်မသိကြဘူး။ နောက်ပြီးတော့ လှူသင့်တယ်

အဓိက အကြောင်းရင်းကတော့ လှူသင့်တယ် ဆိုတာကို သိပ်မသိကြဘူးလို့ ထင်တယ်လေ။”

“I think that some don't know the place of blood donation. They also don't know that blood can be donated. Besides, they don't know blood should be donated. The main thing is that they don't know that blood should be donated.”

(24years, graduated, replacement regular female donor)

“ကျွန်တော်တို့ဆိုရင် ကြော်ငြာတဲ့ဟာမှာတော့ ပါမှာပေါ့နော်၊ ဘယ်နေရာမှာ လာလှူလို့ရတယ် ဆိုတာလေးတွေ information တွေက တချို့ကြတော့လည်း နည်းတယ်ပေါ့နော်။ အားနည်းတယ်။ အဲလိုလေးတွေ သိရရင်တော့ ကောင်းမယ်။”

“As for us, information was included in our advertisement. The information about the place where blood can be donated is very rare. I think it is good to know that information.”

(31years, graduated, replacement non-regular male donor)

“မလှူဖူး ရင်တော့ အပ်ကြီးကို ကြောက်ကြတယ်၊ လှူဖြစ်သွားရင်တော့ သိပ်မကြောက်ကြ တော့ဘူး။”

“People, who never donate blood before, are afraid of needle but they are not frightened after they had donated blood.”

(32years, graduated, voluntary regular male donor)

“သွေးမလှူတဲ့ သူတွေလည်း သမီး ပတ်ဝန်းကျင်မှာ ရှိပါတယ်၊ တချို့ကျ အပ်ကြောက်တာရယ် တချို့ကျ သူတို့ ကျန်းမာရေးကို ထိခိုက်မှာ စိုးတာရယ်”

“There are people who don't donate blood in my surroundings. Because some are afraid of needle prick and some are anxious for affecting their good health.”

(22years, University student, voluntary non-regular female donor)

“ပြီးခဲ့တဲ့ မကြာခင်ကတောင် ရွှေတိဂုံဘုရားမှာ သွေးလှူဖို့ ဝင်သွားလိုက်သေးတယ်။ အဆင်မပြေလို့ မလှူဖြစ်တာ။ ကျွန်တော် သွားတဲ့အချိန်မှာ လူတွေ

အများကြီးတော့ထိုင်နေတယ် ကျွန်တော် ဘယ်သူကို မေးရမှန်းမသိဘူး။ သွေးလှူတဲ့ ဆိုင်းဘုတ်တွေတော့ ရှိတယ် ကျွန်တော် လိုက်ကြည့်တယ် ပေါ့နော်။ ဘယ်သူကို မေးရမှန်း မသိဘူး။ အထဲဝင်ရမလား မဝင်ရမလားလည်း မသိဘူး ကြိုဆိုတာ မေးမြန်းတာလည်း မရှိတော့ မလှူဖြစ် လိုက်ဘူးပေါ့နော်။ အဲ့လို မဟုတ်ရင်တော့ လှူဖြစ်မယ် ထင်တယ်။”

“Recently, I had been to Shwedagon Pagoda to donate blood but I didn’t donate blood because of inconveniences. There were many people sitting, I didn’t know whom to ask and whether to go inside or not even though there was a blood donation bill board, No one welcome and so I was unable to donate blood. If not, I would donate.”

(31years, graduated, replacement non-regular male donor)

(B) Challenges concerning service of blood bank

Regarding the service of blood banks, half of blood donors described that they had no difficulties in blood donation. Half of respondents told that duration of donation process was prolonged at some events and some hospitals. One respondent stated that she had experienced that 3 times of piercing by needle for single blood donation and it was unpleasant for her. Only one respondent described that some staffs of blood bank neglected blood donors and needed to provide good service.

“အခက်အခဲဆိုရင် အဓိကကတော့ တချို့ ပုဂ္ဂလိက ဆေးရုံတွေ ဆိုရင် သွေးကို သူတို့ single check တွေ double check တွေနဲ့ သူတို့စစ်ပြီးမှ ယူတယ်ပေါ့နော် ယူတော့ အဲဒီအခါကျ အချိန်က ဟို (၁)နာရီလောက် ကြာရမှာ (၄)(၅)နာရီလောက် ကြာသွားတယ်ပေါ့။ တချို့ လာလှူတဲ့သူက အချိန် အရမ်း မရတာနဲ့ ပတ်သတ်ပြီးတော့ စိတ်ကသိကအောက် ဖြစ်ရတာပေါ့နော်။”

“Regarding difficulties, some private hospitals receive donated blood after doing single check or double check and so duration may last for 4-5 hours instead of 1 hour. Some blood donors felt upset because they don’t have much time.”

(31years, graduated, replacement non-regular male donor)

“.....တစ်ခေါက်က အဆင်မပြေတာကျတော့ ညီမက သွေးဖောက်ရ နည်းနည်းခက်တယ်။ သွေးဖောက်တာ အဲ့ဒီတုန်းက သွေးလှူတဲ့အပ်နဲ့ (၃)ခေါက်လောက် ထိုးရတာ ဆိုတော့ သိပ်အဆင်မပြေဘူးပေါ့နော်၊ လှူတော့လှူဖြစ်ခဲ့ပါတယ်။”

“.....*One of the difficulties that I faced was that I had taken phlebotomy for 3 times with blood donated wide-bore needle as my veins were difficult to find out. That event was inconvenient for me but I could donate at that time.*”

(24years, graduated, replacement regular female donor)

“ကျွန်တော်သွေးလှူတယ် သူတို့က ဘယ်လိုလဲဆိုတော့ ဟိုးမှာ စကားတွေပြောနေတယ် သွေးကိုလာမလုပ်ဘူး သွေးက ဒီမှာဖောင်းပြီးတော့ လျှံနေပြီ ဒါနဲ့ ဘေးက သူ့သူငယ်ချင်း က တောင်ပြောတယ် ဟယ် နင်ဒီမှာ သွေးတွေ အရမ်းများနေပြီ ရတယ် ပိုလှူရတာပေါ့နော် ဘာညာနဲ့ သူကတောင် ကျွန်တော့်ကို ပြောလိုက်သေးတယ် ။ သူတို့လုပ်ဆောင်ချက်လေးတွေ လိုအပ်တယ်။”

“*As I was donating blood, the staff of blood bank was talking to another staff and she didn't take care of blood donors. My blood was spilled after filling blood bag. Another staff, her friend told to her that there was too much blood. She replied her that never mind and teased me that I could donate much blood. So, there are some requirements regarding their activities.*”

(48years, middle school attended, voluntary regular male donor)

(C) Challenges concerning opening hour of blood bank

A few blood donors emphasized that they had some inconveniences concerning opening hour of blood bank such as lunch time break of blood bank.

“မနေ့ကသွေးလှူရှင်ခေါ်ထားတယ် ထမင်းစားချိန် ရောက်လာပြီး အချိန်မပေးနိုင်တော့ ပြန်သွားတယ်”

“*Yesterday, I called blood donor. He reached blood bank at lunch time and returned back because he had no much time to wait.*”

(48years, middle school attended, voluntary regular male donor)

(D) Challenges concerning mis-use of donated blood

Some blood donors stated that there were mis-use of donated blood and blood brokers at some hospitals.

“အဲဒီတုန်းက ဘယ်လိုဖြစ်လဲဆိုတော့ ကျွန်တော်လည်း ဆေးရုံဝင်းထဲမှာပဲ နေတာဆိုတော့ အသိတစ်ယောက်က ပြောတာ မင်းသွေးကိုကွာ မင်းလှူထားတာ ဟိုအကိုကြီးကလိုတာကွာ အဲဒီသွေးလှူဘဏ်က အကိုကြီးက ရောင်းစားလိုက်တယ်တဲ့ ခုတော့ သူလည်းသေပါပြီ။ ကျွန်တော်လည်း အဲဒါတော့ မကောင်းဘူးကွာ ငါက စေတနာနဲ့လှူတာကို လို့ ပြောမိတယ် ကြာပါပြီ။ ခုဆို နှစ် (၂၀) လောက်ရှိပြီ။”

“At that time, as I lived in the hospital compound, one of my friends told me that my donated blood was sold out by a staff of blood bank. That staff is dead now. I told that it was an unethical manner and I donated my blood in good sense. That event was occurred last 20 years ago.”

(48years, middle school attended, voluntary regular male donor)

“ကျွန်တော် လှိုင်သာယာမှာ တစ်ခါကြုံဖူးတာ သွေးလှူဖို့ အခကြေးငွေယူတာပေါ့နော် ကျွန်တော်တို့ ဒီခေတ်ဆန်ဆန်ပြောရရင် ပွဲစားပေါ့နော် အဲလိုပွဲစားနဲ့ကြုံဖူးတယ်။..... လူနာရှင်နဲ့ ကြားက ပွဲစားက အဲလိုလုပ်သွားတာပေါ့ အဲလိုကိစ္စလေးတွေလည်း နယ်တွေမှာတော့ရှိတယ်။”

“I faced an event of taking money for donating blood. I met a blood-broker, in modern term, who earns money between blood donors and patients for donating blood, at Hlaing Thar Yar. There are such problems in rural areas.”

(31years, graduated, replacement non-regular male donor)

(E) Challenges concerning health related complications

Only one blood donor mentioned that she had experienced few complications such as dizziness after blood donation.

“ကြုံတွေ့ရတဲ့ အခက်အခဲကတော့ လှူပြီးရင် မူးတဲ့ အခက်အခဲတော့ ရှိတယ်။ တစ်ရက်လောက်တော့ မူးတတ်တယ်။ အိပ်ရာထဲမှာ လှဲနေလိုက်ရင်တော့ သက်သာသွားတယ်”

“The complication I experienced was that I felt dizzy for one day after blood donation, relieved by lying down in bed.”

(22years, University student, voluntary non-regular female donor)

5.8.6. Suggestions for more blood donors who donate regularly

(A) Health education

Almost all suggested that health talk about blood donation should be done at educational institutions, various work places till reaching the rural and community level. Some donors suggested that health education about blood donation and benefits of blood donation should be given by blood donors rather than health care providers. One- third of donors suggested that blood donors should encourage people who fear needle pricks.

“လှူရင်ကောင်းတယ်ပေါ့နော်၊ အဲ့လိုမျိုး ကျန်းမာရေးအတွက်လည်း ကောင်းတယ်၊ သူတစ်ပါးကို ကူရတဲ့အတွက်လည်း ကောင်းတယ်၊ အဲ့လိုမျိုး သွေးလှူဒါန်းခြင်းရဲ့ ကောင်းကျိုးတွေကို ပညာပေးရင်ပေါ့နော် ကောင်းမယ် အဲ့ဒါဆို လှူတဲ့လူလည်း ပိုများလာမယ်။”

“Blood donation is good for donors’ health and also good for helping others. If the benefits of blood donation are informed through health education, the numbers of blood donors can be increased.”

(24years, graduated, replacement regular female donor)

“အဲတော့ သွေးလှူရှင် အချင်းချင်းက တဆင့် ပြောတာ ပိုကောင်းတယ် ။ ဆရာဝန် တွေ သွေးလှူဘဏ်တွေအနေနဲ့ ပြောတာထက်လေ အဲလိုထင်တယ်။”

“So, I think that sharing information about blood donation should be better through peers than doctors or blood bank.”

(48years, middle school attended, voluntary regular male donor)

“အပ်ကြောက်တဲ့ သူတွေ ကိုလေ ဒီ အပ်ထိုးတာ သိပ်မနာပါဘူး ခဏလေးပဲ ပုရွက်ဆိတ်ကိုက်တာ လောက်တောင် မနာဘူးလို့ ပြောပြီး အားပေးတယ် အဲ့လို ခေါ်ကြည့်တော့ အဲ့လောက်ကြီး မနာဘူးလား အဲ့လောက်ကြီး မနာရင်တော့ နောက်ဆိုရင် လိုက်လှူမယ် လို့ ပြောပါတယ်။”

“I persuaded people who are afraid of needle prick that phlebotomy would not cause much pain. The pain was just a moment. The pain was less than an ant’s bite. Then they told me that they will join me and donate blood if there was not so much pain.”

(22years, University student, voluntary non-regular female donor)

(B) Services of blood bank

One-third of blood donors wanted that duration of donation process should be as fast as possible. Some donors wanted that blood bank should test donors’ blood before blood donation and they got their blood test results at once. Only one donor suggested that blood bank should give the best service to all blood donors. Only one donor wanted that all staffs at blood bank should be polite and friendly.

“သွေးလှူဘဏ်တွေမှာ သွေးလှူရှင်တွေကို အချိန်တိုအတွင်း မြန်မြန်ဆန်ဆန် လှူနိုင်အောင် ဆောင်ရွက်ပေးဖို့ လိုတယ်ခင်ဗျ။”

“The service of blood bank should be fast enough for blood donors to donate blood within a short period.”

(31years, graduated, replacement non-regular male donor)

“သွေးလှူဘဏ်တွေ အနေနဲ့လည်း တစ်ခါလာရင် နောက်တစ်ခါ ထပ်လာချင်အောင်လို့ ဝန်ဆောင်မှု ကောင်းကောင်း ပေးပေါ့။”

“The service of blood bank should be favorable to blood donors, who come one time, wish to come for repeated times.”

(32years, graduated, voluntary regular male donor)

“သွေးအရင်စစ်ပြီးမှ လှူသင့်တယ်လို့ ထင်တယ်။ ဘာလို့လဲဆိုတော့ အဲ့ လှူမယ့်သူ ဥပမာ သမီးသွေးလှူမယ်ဆိုရင် သမီးသွေးက မဖောက်ပဲ တန်းယူလိုက်တယ်ဆိုတော့ သမီးမှာ တကယ်လို့ ရောဂါရှိနေခဲ့ရင် တစ်ဖက်လူကို ကူးသွားမှာစိုးလို့။”

“I think blood should be checked before donation because I worry that, for example, if I had a disease, I donate blood and take my blood without checking leading to transmission of disease to others.”

(22years, University student, voluntary non-regular female donor)

(C) Incentives to blood donors

One-third of blood donors recommended that incentives should be given to blood donors.

“တခြားသူတွေအတွက် လက်ဆောင်တွေလည်း များများပေးပေးပါ။”

“I recommend for others that so much presents should be given.”

(32years, graduated, voluntary regular male donor)

(D) Opening hour of blood bank

A few blood donors wanted blood banks should be opened for 24/7 so as blood donors can donate blood all the time including holidays.

“လှူချင်တာကတော့ အချိန်တိုင်း လှူလို့ရရင် ပိုကောင်းတာပေါ့။ တစ်ချို့ ရုံးသမားတွေ ကျတော့လည်း ပိတ်ရက်ပဲအားတာ။”

“I wish that it would be better if blood can be donated every time because some office staffs are free only on weekends.”

(32years, graduated, voluntary regular donor)

(E) Blood Donation Ceremony

One donor suggested that blood donation ceremonies should be done to encourage more people to become a regular blood donor.

“လှူတဲ့သူတွေကို တဘက်တို့ ဘာတို့ ပေးတာ တော်တော်များများ လက်ဆောင်ရကြတယ်။ အဲလို အထိမ်းအမှတ် အခမ်းအနား စုပေါင်းသွေးလှူပွဲလေးတွေ လုပ်ပေးစေချင်ပါတယ်။ လက်ဆောင်တွေလည်း ပေးတာမျိုးပေါ့နော်။”

“As blood donors were given presents such as towels, most donors got presents. So, I want blood bank to celebrate blood donation ceremonies in groups as commemoration and to give presents to blood donors.”

(48years, middle school attended, voluntary regular male donor)

5.8.7. Reason for regular/ non-regular donation

(A) Reason for regular donation

Almost all regular donors emphasized that they could donate blood regularly because of being members of blood donation charity group. One regular donor stated that reminder phone call from blood bank also helped to donate regularly. Another one donor described that he donated blood regularly because blood donation is beneficial for his health and blood is necessary all the time.

“ပုံမှန်လှူဖြစ်တာကတော့ သွေးလှူအသင်းကြောင့်ပဲခင်ဗျ။ ဘာဖြစ်လို့လဲဆိုတော့ အရင်က ကျွန်တော်က တွေ့မှလှူတာလေ ကြုံမှလှူတာ၊ သွေးလှူအသင်းကတော့ အမြဲလိုနေတော့ ကျွန်တော်ကတော့ ပုံမှန် အမြဲတမ်း လှူဖြစ်ပါတယ်။”

“I can donate blood regularly because of blood donation charity group. Previously, I donate blood only when I directly met with patients and it was only by chance. Now, I am donating blood regularly because blood donation charity groups always need blood.”

(48years, middle school attended, voluntary regular male donor)

“.....ရန်ကုန်ရောက်တော့ ညီမက ရန်ကုန်ဆေးရုံကြီးမှာ အမျိုးသား သွေးလှူဘဏ်မှာ လှူတယ်ပေါ့နော်။အဲ့ဒီကလည်း ညီမကို ပုံမှန် ဖုန်းဆက်ပေးတယ် ပြည့်ပြီဆိုရင်လေ။ အဲ့ဒါကနေ ပြီးတော့ အဲ့ဒီမှာလည်း သွေးလှူဖြစ်တယ်။ အခု နောက်ပိုင်း သွေးလှူရှင် အဖွဲ့တွေနဲ့ တွေ့အခါကျတော့ သူတို့ကလည်း လူနာရှင် တိုက်ရိုက် လိုတယ် ဆိုရင်တော့ သူတို့ကို လှူပေး ဖြစ်တယ်ပေါ့နော်။”

“.....As I have arrived Yangon, I donated blood at Yangon General Hospital, National Blood Centre. They contacted to me by regular reminder phone call at my due date for next blood donation. So, I donated there. Then, recently, I also join the blood donation charity groups and if needed, donate blood directly to patients and them.”

(24years, graduated, replacement regular female donor)

“ကျွန်တော်က ပုံမှန် အမြဲလှူဖြစ်ပါတယ်။ အဓိက ကတော့ကိုယ့်အတွက်လည်း ကျန်းမာရေး ကောင်းတယ် ပေါ့နော်၊ ပြီးတော့ ဒီသွေးကလည်း အမြဲတမ်း လိုနေကြတာလေ။”

“I donate blood regularly. The main thing is that blood donation is beneficial to my health health also. And there is always a need for blood.”

(32years, graduated, voluntary regular male donor)

(B) Reason for non-regular donation

Almost all non-regular donors mentioned that they had not donated regularly because they want to donate blood only when they meet patients who need for blood. Only one irregular donor told that reason for not donating regularly is due to her health condition.

“ဦးဇင်းခံယူချက်ကတော့ လူနာနဲ့ လိုအပ်မှ လှူတယ် သွေးလှူဘဏ်တွေကို သွားပြီးတော့ သီးသန့်တော့ သွားမလှူဘူး၊ လူနာရှင်နဲ့ တိုက်ရိုက်တွေ့မှ လှူဖြစ်တယ်။ ဦးဇင်းကတော့ တိုက်ရိုက်တွေ့မှ ပိုပြီးအကျိုးရှိတယ်ထင်တာပေါ့။ လူနာတွေ တိုက်ရိုက် တွေ့တဲ့အချိန်မှာ အဲလိုမျိုး လှူဖြစ်တယ်။”

“In my opinion, I only donate blood as necessary for the patients directly, not donate to blood bank particularly. I donate blood only when I met patient’s attendants. I think that blood donation directly to the patients is more effective, so I did it.

(30 years, graduated, replacement non-regular monk donor)

“ပုံမှန် မလှူဖြစ်တာ ကတော့ ကျန်းမာရေးလည်း သိပ်မကောင်းတော့လေ”

“I cannot donate regularly because my health is not good.”

(22years, University student, voluntary non-regular female donor)

5.8.8. Desire to donate blood in future

All blood donors have willingness to donate blood in future when being asked to do so. Almost all blood donors have willingness to encourage relatives and friends to donate blood.

“ကျွန်တော်ကတော့ နောက်လည်းသွေးလှူဖို့ဆန္ဒရှိပါတယ် ။အသက်(၅၀) ထိဆိုလို့ ဟိုတစ်ခေါက်က ပြောသံ ကြားတော့ ကျွန်တော် (၅၀)ထိပဲ လှူရမယ် ထင်တာ ခု(၆၀)ထိတောင် လှူလို့ရတယ် ဆိုတော့ လှူလို့ ရသလောက် လှူသွားမှာပါ။”

“As for me, I have desire to donate blood in future. I heard that blood can be donated up to 50 years of age and I think I will donate until my 50 years. But now, the age limit is 60 years and I will donate blood as possible as I can.”

(48years, middle school attended, voluntary regular male donor)

“အခြားသူတွေကိုလည်း ကျွန်တော် တိုက်တွန်းပါတယ် သူငယ်ချင်းတွေ တော်တော်များများ ဆိုရင် လှုံ့ဆော်ပြီးတော့ အတူသွားဖြစ်တယ် လှူဖြစ်တာများတယ်။”

“I encouraged other people to donate blood. As most of my friends who were persuaded, we went together and donated blood together.”

(32years, graduated, voluntary regular male donor)

“သမီးအနေနဲ့ နောက်လည်း လှူဖို့ဆန္ဒ ရှိပါတယ်။ သူများတွေကိုလည်း လှူဖို့ တိုက်တွန်းမယ် စိတ်ကူးပါတယ်။ လှူတဲ့သူတွေ များလာအောင် သူငယ်ချင်းတွေကို တိုက်တွန်းမယ်။”

“As for me, I wish to donate blood in future. I also wish to encourage others to donate blood. In order to increase blood donors, I will persuade my friends to donate blood.”

(22years, University student, voluntary non-regular female donor)

Table (5.25) Summary of blood donors' themes for blood donation

Themes	Sub-Themes	
1. Perception about blood donation		Noble meritorious conduct Good for both sides
2. Experiences	First experience	Excited and frightened Appreciated and satisfied Persuaded by her friends Mother being a regular blood donor
	Different experiences	First>difficult, Repeat>easier Viscous blood before donation (mis-concept)
3. Donors' eligibility criteria		Not completely described Good sleep Avoid smoking and alcohol
4. Sources of information for blood donation	Multi-media such as television, radio, social media	Should distribute
	Social connections	Environment/ surroundings Family/ relatives
	Hospitals/ Clinics	Got information Should distribute
5. Challenges of blood donation	Barriers	Ignorance of information on blood donation, not approached to donate blood Fear of needle pricks Afraid of damage to good health No one welcome at Shwedagon Pagoda Blood Centre
	Service of blood bank	Good service Prolonged duration 3 times of piercing by needle for single blood donation Neglect blood donors and need to take good service Lunch time break
	Opening hour of blood bank	
	Mis-use of donated blood	Mis-use of donated blood
	Health related complications	Blood brokers Dizziness
6. Suggestions for more blood donors who donate regularly	Health education	Health talk (at educational places, various work places till reaching the rural and community level) Health education by peers rather than health care providers Blood donors should encourage people who fear needle pricks

Table (5.25) Summary of blood donors' themes for blood donation (Contd.)

Themes	Sub-Themes	
	Service of blood bank	Duration - as fast as possible Donors' blood check before blood donation Should give the best service to all donors All staffs - polite and friendly
	Incentives	Incentives
	Opening hour of blood bank	Accessible and available for 24/7
	Blood donation ceremony	Blood donation ceremony in group
7. Reason for regular/non-regular donation	Reason for regular donation	Members of blood donation group Reminder phone call Blood is necessary all the time
	Reason for non-regular donation	Only when they meet patients who need blood Poor health condition.
8. Desire to donate blood in future		Wish to donate blood in future Wish to encourage relatives and friends to donate blood

CHAPTER (6)

DISCUSSIONS

6.1 Findings from secondary data (Hospital record of utilization of blood and blood products)

6.1.1 Frequency of distribution of types of blood donor and types of blood group

The voluntary donors were more than the replacement donors by 26% in this study. That was similar in other Myanmar studies (Moe-Moe-Linn, 2016; Win-Win-Khaing, 2011). In Moe-Moe-Linn study, the voluntary donors were more than replacement donors by 14% and in Win-Win-Khaing study, it was 22%. As time passes, the percentage of non-remunerated voluntary blood donors is increasing.

Regarding types of blood group, blood group O was most commonly received (37.5%), followed by blood group B (31.2%), blood group A (22.9%) and blood group AB (8.4%). That was similar in other studies (Moe-Moe-Linn, 2016; Win-Win-Khaing, 2011). Frequency distribution of blood group serology among blood donors was similar among population.

6.1.2 Distribution of utilization of blood components and utilization by different wards

Regarding blood components, packed cells was the most commonly used of blood product (64.6%) and fresh frozen plasma was the second most used of blood product (21.0%) in this study. That was different in other studies (Moe-Moe-Linn, 2016; Win-Win-Khaing, 2011). Both these studies described that whole blood was most commonly used of blood type and packed cell was the second most commonly used of blood type. This is because the use of packed cell is more preferred than whole blood nowadays (Lattimer and Perera, 2002). Regarding different wards, B block (Infection ward) was the ward that the most used of blood (38.7%) in current study. That was similar in Win-Win-Khaing study (Win-Win-Khaing, 2011). The reason is not only infected cases but also patients with benign anaemic condition are admitted to B block also.

6.1.3 Blood inventory data

Total issue of blood units exceeded than total received blood units by 732 units within 6 months in 2019. That was similar in other Myanmar studies (Moe-Moe-Linn, 2016; Win-Win-Khaing, 2011). The demand of blood still exceeds than the supply of blood in this hospital.

Regarding discarding of blood, total discarded blood units were 108 units, (4.8% of total received blood) in this study. In Moe-Moe-Linn study in 2016, total discarded blood units were 5% of total collected blood and in Win-Win-Khaing study in 2011, that were 7.7% of total collected blood (Moe-Moe-Linn, 2016; Win-Win-Khaing, 2011). As time passes, the percentage of discarded blood among total received is decreasing.

The commonest reason for discarded blood was positive transfusion transmissible infections. That was similar in other studies (Moe-Moe-Linn, 2016; Win-Win-Khaing, 2011). As TTIs are very important for both donors and recipients in health care system, TTIs screening is essential in blood bank service.

6.1.4 Distribution of TTIs among donors

Among total blood donors 2262, TTI seropositive were 84 units i.e., prevalence of 37 per 1000 blood donors. Among TTIs from donors, HBsAg (+) was the most, VDRL (+) was the second most and HIV was the third. That was a little different in other studies in which the commonest was hepatitis B, the second commonest was syphilis and the third commonest was hepatitis C (Moe-Moe-Linn, 2016; Win-Win-Khaing, 2011; Nang-Marr-Lai-Seng, 2010). The reason for relatively increased prevalence of HIV among TTIs in current study may be due to the category of HIV in current study included both HIV positive and HIV indeterminate.

TTI seropositive were more common in new donors than repeated donors in current study. The similar finding was found in Nang-Marr-Lai-Seng study (Nang-Marr-Lai-Seng, 2010). In order to get safe blood transfusion, more repeated donors should be preferred.

6.1.5 Reasons for deferred blood donors

The commonest reason for deferred blood donors was due to blood pressure (39.9%) and the second reason was haemoglobin level. That finding was a little different in other studies (Gupta, 2019; Nang-Marr-Lai-Seng, 2010).

6.2. Background characteristics of blood donors

Age group between 26 to 35 years was commonest among blood donors in this study. This was quite different in other studies (Aye-Aye-Mon, 2018; Getta et al., 2018; Ou-Yang et al., 2017). The study found that more blood donors were single status (51.2%) among participants and the similar finding in other studies (Aye-Aye-Mon, 2018; Conceição et al., 2016) and the opposite finding in India study (Dubey and Dua, 2017).

Male blood donors (68.7%) were more common than female blood donors (31.3%) in this study. In Aye-Aye-Mon study and Nang-Marr-Lai-Seng study male female ration were almost equal (Aye-Aye-Mon, 2018; Nang-Marr-Lai-Seng, 2010). India and Bangladesh (2017), almost all blood donors were male (Dubey and Dua, 2017; Akhtar et al., 2017). The reason is males are more suitable for being a blood donor than females who had interfering periods for blood donation such as regular menstrual cycles, pregnancy, and lactation. The opposite finding was found in Brazil study in which among blood donors, only 5% were male and 95% were female (Conceição et al., 2016). Moreover, gender plays important roles in the motivation to give blood and further consideration in relation to strategies to recruit donors and the management of critical events during donation (Bani and Giussani, 2010).

Regarding religion, Buddhist was the commonest in this study and it was consistent with other studies (Aye-Aye-Mon, 2018). Regarding ethnic groups, Bamar was the commonest among blood donors in this study and the similar finding was found in other Myanmar studies (Aye-Aye-Mon, 2018; Nang-Marr-Lai-Seng, 2010). That is why in Myanmar, Bamar Buddhist is the commonest among population. In present study, both high school level and graduate and above level were the commonest (each had 28.9%). That was similar in other studies (Aye-Aye-Mon, 2018; Abderrahman and Saleh, 2014; Dubey et al., 2014; Uma, Arun and Arumugam, 2013; Buciuniene et al., 2006).

Most blood donors resided in urban region in this study. That was consistent with other studies (Dubey et al., 2014; Buciuniene et al., 2006). But, it was quite different in Jordan study (Abderrahman and Saleh, 2014). The reason is because the study site, Central Women's Hospital is situated in urban region. Most donors worked as self-employed in this study. Aye-Aye-Mon study in 2018 found that most blood donors worked as company employees (Aye-Aye-Mon, 2018). In North India study in 2014, most blood donors (both voluntary and replacement blood donors) worked in service occupation (Dubey et al., 2014). India study in 2013 stated that majority (68.9%) of blood donors were employed (Uma, Arun and Arumugam, 2013).

6.3. Knowledge of blood donors about blood donation

Regarding overall knowledge level, among all the respondents, there were blood donors with good knowledge (57%) in this study. That finding was quite similar in other studies (Aye-Aye-Mon, 2018; Raghuwanshi, Pehlajani and Sinha, 2016; Márquez-Melgarejo et al., 2015). The current finding was quite different in Jordan study in 2014 (Abderrahman and Saleh, 2014).

In this study, majority of blood donors (86.1%) knew that regular voluntary blood donation have medical benefits. That was quite different in Aye-Aye-Mon study (Aye-Aye-Mon, 2018) but quite similar in Ethiopia study (Jemberu, Esmael and Ahmed, 2016). In current study, most donors (71.1%) knew that common blood groups and among them, most (80.5%) could mention all 4 blood groups and 96% of donors could know their own blood group. That was quite similar in Nigeria studies (Benedict et al., 2015; Nwogoh, Aigberadion and Nwannadi, 2013) and quite different in Jordan study (Abderrahman and Saleh, 2014).

In current study, almost all donors (98.8%) knew sources of blood supply but among them, minority (20.7%) denied that blood bank was not a source of blood supply. That was similar in other studies (Aye-Aye-Mon, 2018; Nuako, Bedu and Ansong, 2016). In current study, blood donors stated that source of information on blood donation was mainly from voluntary blood donors (85.5%). That was quite different in other studies (Aye-Aye-Mon, 2018; Dubey and Dua, 2017; Parash et al., 2017; Abderrahman and Saleh, 2014).

Regarding eligible criteria, eligible age for blood donation was known by most donors (80.1%) in current study. That finding was different in Pakistan study (Kanwal et al., 2019). But that was similar in other studies (Aye-Aye-Mon, 2018; Aslami et al., 2015; Uma, Arun and Arumugam, 2013). Eligible minimum weight for blood donation was known by about one-third of blood donors (38.6%) in this study. That was quite similar in Aye-Aye-Mon study (Aye-Aye-Mon, 2018) but, that was quite less than in other studies in which more respondent knew about it (Kanwal et al., 2019; Aslami et al., 2015). This is because other studies were done among medical university students who had more knowledge than blood donors.

This study found that eligible blood pressure for blood donation was known by nearly half of blood donors (45.2%). That was quite different in other studies (Aye-Aye-Mon, 2018; Aslami et al., 2015). In current study, eligible haemoglobin percent for blood donation was known by minority of blood donors (9%). This finding was quite less than other studies (Aye-Aye-Mon, 2018; Akhtar et al., 2017; Aslami et al., 2015). This finding indicates that health education message about eligible criteria for blood donation (especially haemoglobin percent) should be more promoted to blood donors.

This study found that nearly three-fourth of blood donors (72.9%) could correctly tell the maximum times of donation in a year. That was similar in Aye-Aye-Mon (Aye-Aye-Mon, 2018) but quite different in other studies (Atherley et al., 2016; Aslami et al., 2015). The reason may be blood donors (especially regular donors) usually have more knowledge than community. This study observed that about one-third (42.2%) of donors could correctly tell the amount of blood donated each time. That was similar in other studies (Aye-Aye-Mon, 2018; Aslami et al., 2015). This study also observed that duration of a donation process could be correctly told by two-third (66.3%) of donors. That was not similar in Aye-Aye-Mon study in which only 35.8% of donors (Aye-Aye-Mon, 2018).

Regarding deferral criteria in current study, all respondents (100%) could tell that HIV positive people cannot donate blood and almost all respondents (98.2%) could tell people with hepatitis cannot donate blood. That was similar in Aye-Aye-Mon study (Aye-Aye-Mon, 2018). In this study, nearly three-fourth (72.3%) of blood donors could aware of transfusion transmitted infections and among them, the risk of

transmission of HIV, Hepatitis B, Hepatitis C, Syphilis, and Malaria were mentioned by 98.3%, 84.2%, 79.2%, 74.2% and 69.2 % of blood donors, respectively. That was consistent with other studies (Aye-Aye-Mon, 2018; Jemberu, Esmael and Ahmed, 2016).

6.4. Attitude of blood donors towards blood donation

Regarding overall attitude in current study, there were 60.2% of blood donors had favorable attitude towards blood donation. This fact was quite less than in other studies (Aye-Aye-Mon, 2018; Abera et al., 2017a; Aslami et al., 2015). The reason for relative less favorable attitude in the present study may be due to the different study sites and different study population. Health care providers and medical students may usually have more favorable attitude than blood donors.

This study observed that most blood donors assumed that there is no need to give incentives (85.5%) and cost (57.2%) to those who donate blood. This finding was similar in other studies (Aye-Aye-Mon, 2018; Márquez-Melgarejo et al., 2015; Aslami et al., 2015). It would be better if travel cost and food cost are provided to the blood donors who are in need. Nearly half of blood donors (41.6%) thought that blood donors should donate blood only when a patient request to donate. This was quite different in other studies (Kanwal et al., 2019; Aye-Aye-Mon, 2018). So, the wrong concept of donating blood only when being requested by patients should be needed to change in the community.

Almost all donors had willingness to donate blood in future and encourage relatives to donate, (98.8%) and (94%), respectively and this was very similar to other studies (Aye-Aye-Mon, 2018; Atherley et al., 2016; Nuako, Bedu and Ansong, 2016; Benedict et al., 2015).

6.5. Blood donation practice of blood donors

Among all the respondents, 56% of blood donors were non-remunerated voluntary donors and 44% of them were replacement donors in current study. This finding was quite different in other studies (Nang-Marr-Lai-Seng, 2010; Abera et al., 2017b; Benedict et al., 2015).

This study found that repeated blood donors were 69% of all donors and new (first time) blood donors were 31% of all donors. This was quite less in Aye-Aye-Mon study (Aye-Aye-Mon, 2018) but very similar to Nang-Marr-Lai-Seng study (Nang-Marr-Lai-Seng, 2010). The different finding was found in other studies (Kanwal et al., 2019; Benedict et al., 2015; Dubey et al., 2014). Therefore, new (first time) blood donors should be encouraged to donate again and repeated donors should be more recruited to achieve 100% voluntary blood donation.

Regarding donation times, blood donors with donation times of 2 to 5 times were the commonest (30.4%) in current study. This finding was similar in Aye-Aye-Mon study (Aye-Aye-Mon, 2018) but quite different in other studies (Cicolini et al., 2019; Aslami et al., 2015). In current study, duration interval less than 1 year was the commonest among all the respondents. The opposite finding was found in Aye-Aye-Mon study (Aye-Aye-Mon, 2018) but very similar to India study (Dubey and Dua, 2017).

In this study, most donors (52.2%) had no special feeling. The different finding was found in other studies (Aye-Aye-Mon, 2018; Abera et al., 2017b; Uma, Arun and Arumugam, 2013). The current study found that the commonest reason for blood donation was voluntary (95.2%) and all respondents did not donate blood for remuneration. This was consistency with other studies (Aye-Aye-Mon, 2018; Abera et al., 2017b).

In current study, there were 31% of blood donors with regular donation practice and 69% of blood donors with non-regular donation practice. The different findings were found in other studies (Jemberu, Esmael and Ahmed, 2016; Nuako, Bedu and Ansong, 2016; Nwogoh, Aigberadion and Nwannadi, 2013). The reason of relatively increased percentage of regular donors was all participants were blood donors in current study. Regular practice was more common among blood donors than health workers and community.

In the study, majority (94.2%) of regular donors stated that the commonest motivator for regular blood donation was “to help other people”. The similar finding was found in other studies (Aye-Aye-Mon, 2018; Asamoah-Akuoko et al., 2017). In current study, among non-regular donors, the commonest deterrent was busyness (23.7%) and about one-fifth of non-regular donors (20.2%) wanted to donate blood

only when they directly meet patients who need blood. The quite different finding was found in Aye-Aye-Mon study (Aye-Aye-Mon, 2018) but, the quite similar finding was found in India study (Dubey and Dua, 2017).

This study observed that most respondents (41.6%) assumed that some people are not willing to donate blood because of fear of fainting or weakness, the second commonest reason (39.8%) they assumed was that fear of being tested for infectious disease and the third reason (39.2%) was ignorance of information on blood donation. This was very similar to other studies (Kanwal et al., 2019; Aslami et al., 2015).

6.6. Suggestions of blood donors

Almost all respondents (95.2%) suggested that educational campaigns should be carried out on importance and benefits of blood donation at not only hospitals but also workplaces/ schools/ universities/ up to grass-root level. That suggestion was quite similar in other studies (Aye-Aye-Mon, 2018; Ou-Yang et al., 2017).

6.7. Association of knowledge, attitude and practice of blood donors

This study observed that the higher the educational level of blood donors, the better knowledge level on blood donation and the finding was statistically strongly significant ($P < 0.001$). The similar finding was found in other studies (Jemberu, Esmael and Ahmed, 2016; Dubey et al., 2014). The current study significantly found that repeated donors had better knowledge level than new (first time) donors ($P = 0.020$). The similar finding was found in other studies (Dubey and Dua, 2017; Dubey et al., 2014).

The study observed that the older age of blood donors, the more favorable attitude on blood donation and the finding was statistically significant ($P = 0.007$). That finding was quite different in India study in 2013 ($P > 0.05$) (Uma, Arun and Arumugam, 2013). Higher educational level was also significantly associated with favorable attitude ($P = 0.037$). This fact was consistent with other studies (Jemberu, Esmael and Ahmed, 2016; Atherley et al., 2016). This study observed that repeated donors were statistically strongly significantly associated with favorable attitude on blood donation than new donors ($P < 0.001$). This observation was similar in other studies (Askari Majdabadi et al., 2018; Atherley et al., 2016).

The current study observed that the older age of blood donors, the more regular practice on blood donation than younger age and the finding was statistically significant ($P=0.040$). That was consistent with other studies (Getta et al., 2018; Atherley et al., 2016; Jemberu, Esmael and Ahmed, 2016). In this study, the more frequent donation times of blood donors, the more regular practice on blood donation, and this association was statistically strongly significant ($P<0.001$). This observation was similar in other studies (Dubey and Dua, 2017; Wevers et al., 2014).

The current study observed that favorable attitude among regular blood donors was significantly higher than that of non-regular blood donors ($P=0.003$). That was consistent with other studies (Atherley et al., 2016; Jemberu, Esmael and Ahmed, 2016).

6.8. Qualitative findings

In current study, suggestions for more regular blood donors were health talk about blood donation should be done at various places till reaching the rural and community level, health education about benefits of blood donation should be given by blood donors rather than health care providers, people who fear needle pricks should be encouraged by blood donors, incentives (such as presents or recognition awards) should be given to blood donors, blood donation services should be accessible and available for 24 hours and mass blood donation ceremonies should be done. This was similar to Malaysia study in which large numbers of people donating also influenced blood donation by respondents (Jaafar, Chong and Alavi, 2017).

In the study, regarding barriers of blood donation, the reasons of some people do not donate blood were due to ignorance of information on blood donation and not approached to donate blood, fear of needle pricks and afraid of damaging their good health by blood donation. That was similar to Malaysia study (Jaafar, Chong and Alavi, 2017) but different in Netherland study (Wevers et al., 2014).

In this study, regarding the poor service of blood banks, prolonged duration of donation process at some events and some hospitals, non-competent phlebotomists, negligence of some staffs and inappropriate opening hour of blood bank such as lunch time break. The similar finding was observed in Malaysia study (Jaafar, Chong and Alavi, 2017). Therefore, the best service should be given

to all blood donors and the opening hour of blood bank should be expanded for example the lunch time break should be shortened or rotation duty shift of staffs should be used at lunch time. Some donors emphasized that there were mis-use of donated blood and blood brokers at some hospitals. Therefore, strategies to eliminate the blood brokers and mis-use of donated blood should be considered and planned.

The current study observed that the regular donors emphasized that they could donate blood regularly because of being members of blood donation charity group and the reminder phone call from blood bank. So, the role of Civil Society Organizations is important for regular donation of safe blood in our country, Myanmar. This study found that non-regular donors mentioned that they had not donated regularly because they want to donate blood only when they directly meet patients who need blood. Therefore, the wrong concept of community needed to be changed in order to get safe blood transfusion.

Study Limitations

In current study, the frequency of donation time, the donation interval and the regular practice of blood donors were used by their own reports. Some blood donors had multiple donation cards because they had not taken previous donation card at the time of blood donation. Therefore, the above information could not be checked with their donation cards. As the study was conducted at Central women's Hospital (Yangon), the study findings could be representative for the study population (blood donors at CWH) and could not be representative for the whole population (all blood donors) in Myanmar.

CHAPTER (7)

CONCLUSIONS

Among every three blood donors, one donates blood regularly. Regular practice was mainly influenced by older age, repeated and voluntary donor, frequent donation times and favorable attitude. The commonest motivator for regular practice was to help other people and the commonest deterrent was busyness. From qualitative aspect, regular practice was mainly determined by being members of blood donation charity group and the reminder phone call from blood bank and non-regular practice was mainly affected by the wish to donate blood only when directly meeting patients who need blood.

About half of blood donors had good knowledge and favorable attitude. Good knowledge was mainly influenced by higher educational level, repeated and voluntary donor. Favorable attitude was mainly influenced by older age, higher educational level, repeated and voluntary donor. Knowledge score and attitude score were positively associated.

Voluntary blood donors are main source of health information on blood donation and role of multimedia (TV and FM channel) in providing health information is still limited. The reasons of some people do not donate blood were due to ignorance of information on blood donation and not approached to donate blood, fear of needle pricks and afraid of damaging their health by blood donation. Regarding the poor service of blood banks, prolonged duration of donation process, non-competent phlebotomists, negligence of some staff and inappropriate opening hour of blood bank such as lunch time break of blood bank were mentioned.

By secondary data, the percentage of voluntary donor was increased and the percentage of discarded blood was decreased at study time compared to past time. The demand of blood still exceeds than the supply of blood in Central Women's Hospital (Yangon).

CHAPTER (8)

RECOMMENDATIONS

1. When health talks related to blood donation should be conducted at various levels of community, the messages such as importance and benefits of blood donation, need to change the wrong concept of donating blood only when directly meeting with patient and awareness and finding ways to elimination of blood brokers.
2. Voluntary blood donors should encourage people to donate blood.
3. The development of function of Civil Society Organizations (CSOs) including Blood Donation Charity Groups should be supported and more regular donors should be recruited to achieve 100% voluntary blood donation together with CSOs.
4. The opening hours of blood bank of Central Women's Hospital (Yangon) should be expanded by means of shortening of lunch time break, part time opening of blood bank on holidays, etc.
5. Health information on blood donation should be disseminated through multimedia channels (FM channel, TV).

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ANNEXES

ANNEX (1)

Variables and Operational Definitions

No.	Variable	Operational Definitions	Scale of Measurement
1.	Type of Donors Non-remunerated Voluntary Replacement New (First time) Repeated Regular Non-regular	A person gives blood or its components with his/her own free will without incentive/payment A person who donates blood only when a family member or friend or other requires transfusion. A person who donates for first time A person who donates twice or more A blood donor with 4 donations or over 4 donations within previous 2 years A blood donor with less than 4 donations within previous 2 years	Nominal
2.	Blood group	Common Blood groups (A, B, AB, O)	Nominal
3.	Age	Age of blood donors in completed years	Ratio
4.	Sex	Gender of blood donors	Nominal
5.	Education	Education level of blood donors (highest level of attended school)	Nominal
6.	Knowledge Level Good Knowledge Poor Knowledge	Knowledge score more than and equal to median score (≥ 20) Knowledge score less than median score (< 20)	Nominal
7.	Attitude Level Favorable Attitude Un-favorable Attitude	Attitude score more than and equal to median score (≥ 46) Attitude score less than median score (< 46)	Nominal

ANNEX (2)

သုတေသန လုပ်ငန်းတွင် ပါဝင်ဆောင်ရွက်ရန် သဘောတူညီချက်တောင်းခံခြင်း

ဤသဘောတူညီချက်မှာ ဗဟို အမျိုးသမီးဆေးရုံကြီး (ရန်ကုန်)တွင် သွေးလာရောက်လှူဒါန်းသော သွေးလှူရှင်များ၏ သွေးလှူဒါန်းခြင်း နှင့်ပတ်သက်သော ခံယူချက်၊ သဘောထားဆိုင်ရာ အချက်များ၊ လှုံ့ဆော်မှုနှင့် အဟန့်အတားဆိုင်ရာ အချက်များအား သုတေသနပြုလုပ်ခြင်း လုပ်ငန်းတွင် ပါဝင်ဆောင်ရွက်ရန် ဖိတ်ခေါ်ခြင်း ဖြစ်ပါတယ်။

အဓိကသုတေသီအမည် - ဒေါက်တာမေဇော်ထွန်း

ဌာန - ပြည်သူ့ကျန်းမာရေး တက္ကသိုလ် (ရန်ကုန်)

သုတေသနခေါင်းစဉ် - ဗဟို အမျိုးသမီးဆေးရုံကြီး (ရန်ကုန်)တွင် သွေးလာရောက် လှူဒါန်းသော သွေးလှူရှင်များ၏ သွေးလှူဒါန်းခြင်းနှင့်ပတ်သက်သော ခံယူချက်၊ သဘောထားဆိုင်ရာအချက်များ၊ လှုံ့ဆော်မှုနှင့် အဟန့်အတားဆိုင်ရာ အချက်များအား သုတေသနပြုလုပ်ခြင်း

အပိုင်း(က) သုတေသန နှင့်သက်ဆိုင်သောအချက်များ

၁။ မိတ်ဆက်နိဒါန်း

ကျွန်မသည် ဒေါက်တာမေဇော်ထွန်း၊ ဆေးရုံအုပ်ချုပ်မှုဆိုင်ရာ မဟာဘွဲ့ သင်တန်းသား၊ ပြည်သူ့ကျန်းမာရေး တက္ကသိုလ်၊ရန်ကုန်မှ ဖြစ်ပါတယ်။ ကျွန်မအနေနဲ့ ဗဟိုအမျိုးသမီးဆေးရုံ ကြီး (ရန်ကုန်) သွေးလှူဘဏ်သို့ သွေးလာရောက်လှူဒါန်းသော သွေးလှူရှင်များ၏ သွေးလှူဒါန်းခြင်းနှင့်ပတ်သက်သော ခံယူချက်၊ သဘောထားဆိုင်ရာ အချက်များ၊ လှုံ့ဆော်မှုနှင့် အဟန့်အတား ဆိုင်ရာ အချက်များအား သုတေသန တစ်ခု ဆောင်ရွက်လိုပါသည်။ သုတေသနအကြောင်းကို ရှင်းပြပြီး သင့်အား ပါဝင်ရန် ဖိတ်ခေါ် လိုပါသည်။ သင့်အနေနှင့် မရှင်းလင်းသည်များ ရှိပါက မေးမြန်းနိုင်ပါသည်။

၂။ ရည်ရွယ်ချက်

ဤသုတေသန၏ ရည်ရွယ်ချက်မှာ ဗဟိုအမျိုးသမီးဆေးရုံကြီး (ရန်ကုန်)တွင် သွေးလာရောက် လှူဒါန်းသော သွေးလှူရှင်များ၏ သွေးလှူဒါန်းခြင်းနှင့် ပတ်သက်သော ခံယူချက်၊ သဘောထား ဆိုင်ရာအချက်များ၊ လှုံ့ဆော်မှုနှင့် အဟန့်အတား ဆိုင်ရာ အချက်များ မည်သို့ ရှိမည်ကို လေ့လာလိုပါသည်။

၃။ သုတေသနဆောင်ရွက်ပုံအမျိုးအစား

ဤသုတေသနသည် သင့်အား သုတေသီက မေးသော မေးခွန်းများကို ဖြေဆိုရမည် ဖြစ်ပြီး မိနစ် ၃၀ခန့် ကြာမြင့်မည် ဖြစ်ပါသည်။

၄။ ပါဝင်မည့်သူများရွေးချယ်ခြင်း

သင့်အား ဤသုတေသန တွင်ပါဝင်ရန် ဖိတ်ခေါ်ခြင်းမှာ သွေးလှူဒါန်းခြင်းနှင့်ပတ်သက်သော ခံယူချက်၊ သဘောထားဆိုင်ရာ အချက်များ၊ လှုံ့ဆော်မှုနှင့် အဟန့်အတား ဆိုင်ရာအချက်များသည် ပြုပြင်ရေး လုပ်ဆောင်မှုများအပေါ် အထောက်အကူပြုနိုင်မည်ဟု ယူဆ၍ ဖြစ်ပါသည်။

၅။ မိမိ ဆန္ဒ အလျောက်ပါဝင်ခြင်း

ဤသုတေသနတွင် သင် ပါဝင် ကူညီခြင်းသည် သင် ၏ သဘော ဆန္ဒ အလျောက် သာ ဖြစ်ပါသည်။ ပါဝင်ခြင်း၊ မပါဝင်ခြင်းမှာ သင်၏ ဆန္ဒအတိုင်း ရွေးချယ်မှုသာဖြစ်ပါသည်။

၆။ လုပ်ဆောင်ပုံ

ဤသုတေသနတွင် ပါဝင်ဖို့ သင်သဘောတူမည် ဆိုလျှင် သင့်ကို သုတေသီက မေးသော မေးခွန်းများကို ဖြေဆိုရမည် ဖြစ်ပြီး မိနစ် ၃၀ခန့်ကြာမြင့် မည်ဖြစ်ပါသည်။ သင်သည် သီးသန့် နေရာ တခုမှာ ဖြေဆိုရာဖြစ်ပြီး သင်၏လူမှုရေး အချက်အလက်များ၊ သွေးလှူဒါန်းခြင်းနှင့်ပတ်သက်သော ခံယူချက်၊ သဘောထားဆိုင်ရာ အချက်များ၊ လှုံ့ဆော်မှုနှင့် အဟန့်အတား ဆိုင်ရာအချက်များ မည်သို့ရှိမည်ကို လေ့လာလိုပါသည်။ မေးခွန်းများဖြေဆိုရာတွင် စိတ်အနှောင့်အယှက် ဖြစ်၍ မဖြေဆို လိုသော မေးခွန်းများရှိပါက သင့်ဆန္ဒ အလျောက် မဖြေဆိုဘဲ ငြင်းဆိုနိုင်ပါသည်။

၇။ အကျိုးကျေးဇူးများ

ဤသုတေသနတွင် ပါဝင်သောကြောင့် သင့်အတွက် တိုက်ရိုက်အကျိုးကျေးဇူးရရှိမည် မဟုတ်ပါ။ သို့သော် သင်ပါဝင်မှုသည် သွေးလှူဒါန်းခြင်းနှင့်ပတ်သက်သော ခံယူချက်၊ သဘောထားဆိုင်ရာ အချက်များ၊ လှုံ့ဆော်မှုနှင့် အဟန့်အတား ဆိုင်ရာ အချက်တို့သည် ပြုပြင်ရေးလုပ်ဆောင်မှုများအပေါ်တွင် အထောက်အကူ ဖြစ်စေပါသည်။

၈။ အချက်အလက်များသိမ်းဆည်းထားရှိခြင်း

ဤသုတေသနမှ ကောက်ယူရရှိသည့် အချက်အလက်များကို လုံခြုံစွာထားရှိမှာဖြစ်ပါသည်။ သင့်ထံမှ သိရှိရသည့်အချက်များကို သုတေသနအဖွဲ့မှ တပါးအခြားမည်သူမှ မသိစေရပါ။

၉။ သုတေသနရလဒ်များကို ဖြန့်ဝေခြင်း

ဤသုတေသန၏ တွေ့ရှိချက်များကို စိတ်ဝင်စားသူများမှ သိရှိနိုင်စေရန် ရလဒ်များကိုသာ ဖြန့်ဝေမှာဖြစ်ပါသည်။

၁၀။ ဆက်သွယ်ရမည့်ပုဂ္ဂိုလ်

အကြောင်းတစ်စုံတစ်ရာ မေးမြန်းလိုလျှင် ဒေါက်တာမေဇော်ထွန်း၊ ဖုန်း ၀၉-၄၄၃၀၇၉၅၅၅ ကိုဆက်သွယ်နိုင်ပါသည်။ ဤသုတေသန ကို လူပုဂ္ဂိုလ်များအပေါ် သုတေသနပြုမှုဆိုင်ရာ ကျင့်ဝတ်ကော်မတီ မှ ခွင့်ပြုချက်ရရှိပြီး ဖြစ်ပါသည်။

အပိုင်း (ခ) သုတေသနတွင်ပါဝင်ရန် သဘောတူညီမှုပုံစံ

ကျွန်ုပ်သည် သွေးလှူဒါန်းခြင်းနှင့်ပတ်သက်သော ခံယူချက်၊ သဘောထားဆိုင်ရာ အချက်များ၊ လှုံ့ဆော်မှုနှင့် အဟန့်အတား ဆိုင်ရာအချက်အား လေ့လာသော သုတေသနတွင် ပါဝင်ရန် ဖိတ်ခေါ်ခြင်းခံရပါသည်။ ဤသုတေသနတွင် ပါဝင်သောကြောင့် ကျွန်ုပ် အတွက် တိုက်ရိုက်အကျိုးကျေးဇူး မရရှိပါ။ ကျွန်ုပ်သည် သုတေသီက မေးသော မေးခွန်းများကို ဖြေဆိုရမည်ဖြစ်ပြီး မိနစ်(၃၀)ခန့်ကြာမြင့်မည်ဖြစ်ကြောင်းနှင့် လူမှုရေး အချက်အလက်များ၊ သွေးလှူဒါန်းခြင်းနှင့်ပတ်သက်သော ခံယူချက်၊ သဘောထားဆိုင်ရာ အချက်များ၊ လှုံ့ဆော်မှုနှင့် အဟန့်အတား ဆိုင်ရာအချက်အား မေးမြန်းမှာဖြစ်ကြောင်း သိရှိရပါသည်။ ဤသုတေသနတွင် ကျွန်ုပ်သည် အထက်ဖော်ပြချက်များကို ဖတ်ရှုပြီးဖြစ်ပါသည်။ မရှင်းလင်းသည့် မေးခွန်းများကိုလည်း မေးမြန်းနိုင်၍ ၎င်းတို့ကို ကျွန်ုပ်သည် ကျေနပ်စွာဖြေဆို ပေးပါသည်။ ကျွန်ုပ် ဆန္ဒ အလျောက် ဤသုတေသန တွင်ပါဝင်ရန် သဘောတူပါသည်။

သုတေသနတွင်ပါဝင်သူအမည် -----

သုတေသနတွင်ပါဝင်သူလက်မှတ် -----

ရက်စွဲ -----

အပိုင်း(ဂ) အသေးစိတ်မေးမြန်းခြင်း အတွက် မိတ်ဆက်စကားပြောရန်

ကျွန်မသည် ဒေါက်တာမေဇော်ထွန်း၊ ဆေးရုံအုပ်ချုပ်မှုဆိုင်ရာမဟာဘွဲ့သင်တန်းသား ပြည်သူ့ကျန်းမာရေးတက္ကသိုလ် ရန်ကုန်မှ ဖြစ်ပါတယ်။ သွေးလှူဒါန်းခြင်းနှင့်ပတ်သက်သော ခံယူချက်၊ သဘောထားဆိုင်ရာ အချက်များ၊ လှုံ့ဆော်မှုနှင့် အဟန့်အတား ဆိုင်ရာအချက်များ၊ အတွေ့အကြုံ၊ အခက်အခဲများကို ဆန်းစစ်သော စာတမ်းပြုစုရန်ဖြစ်ပါတယ်။ () မှဖြေကြားပေးသော အကြံဉာဏ်များ မှာအလွန်အသုံးဝင်မှာဖြစ်ပါတယ်။ အချိန်ပေးပြီး ဖြေကြားပေးတဲ့အတွက် ကျေးဇူးတင်ပါတယ်။ စိတ်ထဲရှိတဲ့အတိုင်း သိထားတဲ့အတိုင်း ထင်မြင်ချက်များ ကိုလွတ်လပ်စွာ ဆွေးနွေးပေးစေလိုပါတယ်။ ဆွေးနွေးချက်များကို အသံသွင်းခွင့်ပြုပါ။ ကျွန်မတို့ မကြားလိုက်ရတဲ့ လွတ်သွားသော အကြောင်းအရာများ ကိုပြန်ဖွင့်ပြီး နားထောင်ချင်လို့ဖြစ်ပါတယ်။ အဲဒီဆွေးနွေးချက်ကို စာတမ်းပြုစုမည့် ကိစ္စတွေမှာပဲ အသုံးပြုမှာ ဖြစ်ပါတယ်။

ဆွေးနွေးရန် မေးခွန်းများ

၁။ သွေးလှူဒါန်းခြင်းနှင့် ပတ်သက်၍ သင်မည်သို့ ထင်မြင်ယူဆ ပါသလဲ။ ဘာကြောင့်လဲ။ သင်၏အမြင်ကို ရှင်းပြပေးပါ။

၂။ သွေးလှူဒါန်းခြင်းနှင့် ပတ်သက်သော အတွေ့အကြုံများကို ပြောပြပေးပါ။ သင်သည် မည်သည့်အကြောင်းရင်း များကြောင့် သွေးလှူဒါန်းပါသလဲ။ သင်၏ သွေးလှူဒါန်းခြင်းနှင့် ပတ်သက်သော မတူညီသော အတွေ့အကြုံများကို ပြောပြပေးပါ။

၃။ သွေးလှူဒါန်းသည့်အခါ ကြုံတွေ့ရသော အခက်အခဲများ၊အဆင်မပြေမှုများ ရှိခဲ့လျှင် ပြောပြပေးပါ။ ဘာကြောင့်လဲ ရှင်းပြပေးပါ။

၄။ သင်သည် ပုံမှန် အမြဲတမ်း သွေးလှူဒါန်းဖြစ်လျှင် ထိုသို့ ပုံမှန် အမြဲတမ်း သွေးလှူဒါန်းခြင်းကို လှုံ့ဆော်အားပေးသော အချက်များကို ပြောပြပေးပါ။ ပုံမှန် အမြဲတမ်း သွေးမလှူဒါန်းဖြစ်လျှင် ထိုသို့ ပုံမှန် အမြဲတမ်း သွေးမလှူဒါန်းနိုင်သော အကြောင်းရင်း များကို ပြောပြပေးပါ။ ဘာကြောင့်လဲ ရှင်းပြပေးပါ။

၅။ သွေးလှူဒါန်းခြင်း အကြောင်း ဘယ်နေရာကနေကြားဖူးပါသလဲ။ လူအများသိစေရန် မည်သို့ဆောင်ရွက်သင့်သည် ဟု သင်ထင်ပါသလဲ။ ဘာကြောင့်လဲ ရှင်းပြပေးပါ။

၆။ သင်သည် နောင်တွင် သွေးလှူဒါန်းရန် ဆန္ဒ ရှိပါသလား။ စေတနာ သွေးလှူရှင်များ ပိုမိုများပြား လာစေရန် သွေးလှူဘဏ်များတွင် မည်သို့ ဆောင်ရွက် သင့်သည်ဟု သင်ထင်ပါသလဲ။ ဘာကြောင့်လဲ ရှင်းပြပေးပါ။

အပိုင်း (ဃ) အသေးစိတ်မေးမြန်းခြင်းတွင်ပါဝင်ရန် သဘောတူညီမှုပုံစံ

ကျွန်ုပ်သည် သွေးလှူရှင်များ၏ သွေးလှူဒါန်းခြင်းနှင့်ပတ်သက်သော ခံယူချက်၊ သဘောထားဆိုင်ရာ အချက်များ၊ လှုံ့ဆော်မှုနှင့် အဟန့်အတား ဆိုင်ရာ အချက်များကို လေ့လာသော သုတေသနတွင် ပါဝင်ဆွေးနွေးရန် ဖိတ်ခေါ်ခြင်းခံရပါသည်။ ဤသုတေသနတွင် ပါဝင်သောကြောင့် ကျွန်ုပ်အတွက် တိုက်ရိုက်အကျိုးကျေးဇူး မရရှိပါ။ ကျွန်ုပ်သည် ဆွေးနွေးရန် မေးခွန်းများကို သေချာစွာ ဖတ်ရှုပြီးဖြစ်ပါသည်။ ၎င်းတို့ကို ကျွန်ုပ်သည် ကျေနပ်စွာဖြင့် ဆွေးနွေး ပေးပါသည်။ ကျွန်ုပ် ဆန္ဒ အလျောက် ဤသုတေသန တွင်ပါဝင်ရန် သဘောတူပါသည်။

သုတေသနတွင်ပါဝင်သူအမည် -----

သုတေသနတွင်ပါဝင်သူလက်မှတ် -----

ရက်စွဲ -----

ANNEX (2)

Informed consent form Institutional Review Board University of Public Health, Yangon

Name of Investigator – Dr May Zaw Tun

Title of research - “Perception, Motivators and Deterrents on Blood Donation among Blood Donors at Central Women’s Hospital (Yangon), 2019”

Part (A) Informed consent form for face-to-face interviewed questionnaires

1. Introduction

I am Dr May Zaw Tun, Master of Hospital Administration candidate at University of Public Health, Yangon. I am doing research on “Perception, Motivators and Deterrents on Blood Donation among Blood Donors at Central Women’s Hospital (Yangon), 2019”

2. Purpose of the research

This study is to assess “Perception, Motivators and Deterrents on Blood Donation among Blood Donors at Central Women’s Hospital (Yangon), 2019”

3. Type of Research Intervention

This research will involve your participation in face-to-face interviewed questionnaires about thirty minutes.

4. Participant Selection

You are being invited to take part in this research because we feel that you will interest in “Perception, Motivators and Deterrents on Blood Donation among Blood Donors at Central Women’s Hospital (Yangon), 2019”

5. Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether participate or not.

6. Procedure

I would like to invite you to take part in this research project. If you accept, you have to answer in face-to-face interviewed questionnaires about thirty minutes. It will be taken at a place which is comfortable for you. The questionnaires will include information about your socio-demographic factors, perception (knowledge, attitude) practice, motivators and deterrents on blood donation. You do not have to answer any

question or take part in the discussion if you feel the issue(s) are too personal or if talking about them makes you uncomfortable.

7. Benefits

Participation in this study will not benefit the participant directly but your participation is likely to help us find out more about how to solve the problems among the non-remunerated voluntary blood donors and patients who need blood transfusion

8. Confidentiality

I will not be sharing information about your participation in this study to anyone outside. The information that I collect from this research project will be kept private.

9. Sharing the Results

The knowledge that I get from research will be only to the persons who have the responsibility for this study. I will then publish the results to be read only by the interested people.

10. Who to contact

If there are any queries before, during and after the study you can directly contact the investigator Dr May Zaw Tun, Phone – 09443079525 or via email drmawzawtun82@gmail.com. This proposal had been reviewed and approved by the Institutional Review Board, University of Public Health, Yangon which is a committee whose task is to make sure that research participants are protected from harm. If you wish to find out more about the committee, contact the secretary of the committee at University of Public Health, Yangon, No. 246, Myoma Kyaung Street, Latha Township, Yangon, 11311. Office phone +95 1395213, +95 1395214 ext:23/25.

Part (B) Consent form

I have been invited to participate in research about “Perception, Motivators and Deterrents on Blood Donation among Blood Donors at Central Women’s Hospital (Yangon), 2019”. I know that I will have to answer the face-to-face interviewed questionnaires about thirty minutes. I am aware that there may be no benefit to me personally. The questionnaires include socio demographic characteristics, perception (knowledge, attitude) practice, motivators and deterrents on blood donation. I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have been asked to my satisfaction. I consent voluntarily to be a participant in this study.

Name of participant -----

Signature of participant -----

Date -----

Part (C) Informed consent form for in depth interview

1. Introduction

I am Dr May Zaw Tun, Master of Hospital Administration candidate at University of Public Health, Yangon. I am doing research on “Perception, Motivators and Deterrents on Blood Donation among Blood Donors at Central Women’s Hospital (Yangon), 2019”

2. Purpose of the research

This study is to assess “Perception, Motivators and Deterrents on Blood Donation among Blood Donors at Central Women’s Hospital (Yangon), 2019”

3. Type of Research Intervention

This research will involve your participation for in depth interview about fifteen minutes.

4. Participant Selection

You are being invited to take part in this research because we feel that you will interest in “Perception, Motivators and Deterrents on Blood Donation among Blood Donors at Central Women’s Hospital (Yangon), 2019”

5. Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether participate or not.

6. Procedure

I would like to invite you to take part in this research project. If you accept, you have to answer for in depth interview about fifteen minutes. It will be taken at a place which is comfortable for you. The questionnaires will include job related problem. You do not have to answer any question or take part in the discussion if you feel the issue(s) are too personal or if talking about them makes you uncomfortable.

7. Benefits

Participation in this study will not benefit the participant directly but your participation is likely to help us find out more about how to solve the problem of human resource attrition related to their job satisfaction.

8. Confidentiality

I will not be sharing information about your participation in this study to anyone outside. The information that I collect from this research project will be kept private.

9. Sharing the Results

The knowledge that I get from research will be only to the persons who have the responsibility for this study. I will then publish the results to be read only by the interested people.

10. Who to contact

If there are any queries before, during and after the study you can directly contact the investigator Dr May Zaw Tun, Phone – 09443079525 or via email [drmawzawtun82@ gmail.com](mailto:drmawzawtun82@gmail.com). This proposal had been reviewed and approved by the Institutional Review Board, University of Public Health, Yangon which is a committee whose task is to make sure that research participants are protected from harm. If you wish to find out more about the committee, contact the secretary of the committee at University of Public Health, Yangon, No. 246, Myoma Kyaung Street, Latha Township, Yangon, 11311. Office phone +95 1395213, +95 1395214 ext:23/25.

Part (D) Consent form for in depth interview

I have been invited to participate in research about “Perception, Motivators and Deterrents on Blood Donation among Blood Donors at Central Women’s Hospital (Yangon), 2019”. I am aware that there may be no benefit to me personally and that I will be paid only for my time spent. I have read the facts thoroughly. I have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

Name of participant -----

Signature of participant -----

Date -----

ANNEX (3)

ဗဟို အမျိုးသမီး ဆေးရုံကြီး (ရန်ကုန်) ရှိ သွေးလှူရှင်များ၏ သွေးလှူဒါန်းခြင်းနှင့် သက်ဆိုင်သော ခံယူချက်၊ သဘောထားဆိုင်ရာ အချက်များ၊ လှုံ့ဆော်မှုနှင့်အဟန့်အတားဆိုင်ရာအချက်များ (၂၀၁၉)

Date _____

Respondent ID _____

နံပါတ်	မေးခွန်းများ	ကုဒ်
(က)	လူနေမှုဘဝဆိုင်ရာ အချက်အလက်များ	
၁။	အသက်(ပြည့်ပြီးနှစ်) -----	_
၂။	ကျား/မ (၁) ကျား (၂) မ	_
၃။	ဘာသာ (၁)ဗုဒ္ဓဘာသာ (၂)ခရစ်ယာန် (၃)အစ္စလာမ် (၄)ဟိန္ဒူ (၅)အခြား(ဖော်ပြပါ) ----- ---	_
၄။	လူမျိုး (၁) ဗမာ (၂) ရှမ်း (၃) ကရင် (၄) မွန် (၅) ရခိုင် (၆) အခြား (ဖော်ပြပါ)----- ----	_
၅။	အိမ်ထောင်ရေး (၁) အပျို/လူပျို (၂) အိမ်ထောင်သည် (၃) အိမ်ထောင်ကွဲ (၄) မုဆိုးမ/ မုဆိုးဖို	_
၆။	နေရပ်လိပ်စာ (၁) ပြည်နယ်/တိုင်း ----- (၂) မြို့နယ် ----- (၃) မြို့ပြ/ ကျေးလက် -----	_ _ _

၇။	ပညာအရည်အချင်း (အမြင့်ဆုံးတက်ခဲ့သော အတန်း) ----- (၁) စာမတတ် (၂) ရေးတတ်ဖတ်တတ် (၃) မူလတန်း (၄) အလယ်တန်း (၅) အထက်တန်း (၆) တက္ကသိုလ်အဆင့် (၇) ဘွဲ့ရ နှင့် အထက်	_ _
၈။	အလုပ်အကိုင် (၁) ခိုခို/ အလုပ်လက်မဲ့/ အိမ်ရှင်မ (၂) အစိုးရ ဝန်ထမ်း ----- (၃) ကုမ္ပဏီ ဝန်ထမ်း ----- (၄) ကိုယ်ပိုင်လုပ်ငန်း ----- (၅) ကျောင်းသား/ ကျောင်းသူ ----- (၆) အခြား(ဖော်ပြပါ) -----	_ _
(ခ)	သွေးလှူဒါန်းခြင်းနှင့်သက်ဆိုင်သော အသိပညာဗဟုသုတဆိုင်ရာအချက်များ (Knowledge)	
၁။	အဓိက သွေးအုပ်စုကြီးများကို သိပါသလား။(အကယ်၍ အဖြေ (၂)ဖြစ်ပါက မေးခွန်း(၃) သို့ကျော်ပါ။) (၁) သိပါတယ်။ (၂) မသိပါ။	_ _
၂။	အဓိက သွေးအုပ်စုကြီး ဘယ်နှမျိုးရှိပါသလဲ။ ဖော်ပြပါ။ ----- -----	
၃။	သင်၏ သွေးအုပ်စုကို သိပါသလား။(အကယ်၍ အဖြေ (၂)ဖြစ်ပါက မေးခွန်း(၅) သို့ကျော်ပါ။) (၁) သိပါတယ်။ (၂) မသိပါ။	_ _
၄။	သိရှိပါက သင်၏ သွေးအုပ်စုကို ဖော်ပြပါ။ (၁) သွေးအုပ်စု အေ (၂) သွေးအုပ်စု ဘီ (၃) သွေးအုပ်စု အေဘီ (၄) သွေးအုပ်စု အို	_ _

၅။	သွေးလှူဒါန်းခြင်း အကြောင်းကို ကြားဖူးပါသလား။ (အကယ်၍ အဖြေ (၂)ဖြစ်ပါက မေးခွန်း(၇) သို့ကျော်ပါ။) (၁) ကြားဖူးပါတယ်။ (၂) မကြားဖူးပါ။	_ _
၆။	သွေးလှူဒါန်းခြင်း အကြောင်း ဘယ်နေရာကနေကြားဖူးပါသလဲ။ (တစ်ခုထက်ပို၍ဖြေဆို နိုင်ပါသည်။) (၁) ယခင်က ကိုယ်တိုင် သွေးသွင်းခဲ့ဖူးသောကြောင့် (၂) တီဗွီ/ ရေဒီယို/ လူမှုကွန်ယက်/ သတင်းစာ/ ဂျာနယ်/ ပုံစတာ/ လက်ကမ်းစာစောင်များတွင် ပါဝင်သော ကြော်ငြာများ မှတစ်ဆင့် (၃) မိသားစု/ သူငယ်ချင်းများ/ အိမ်နီးချင်းများ မှတစ်ဆင့် (၄) စေတနာ သွေးလှူရှင်များ မှတစ်ဆင့် (၅) အခြား(ဖော်ပြပါ) -----	_ _ _ _ _ _ _ _ _ _
၇။	လူ၏သွေးကို ဖန်တီးပြုလုပ် လို့ရပါသလား။ (၁) ရပါတယ်။ (၂) မရပါ။ (၃) မသိပါ။	_ _
၈။	သွေးသွင်းရန် လိုအပ်သော လူနာများအတွက် သွေးထောက်ပံ့မှုကို မည်သည်မှ ရရှိသည်ကို သိပါသလား။ (အကယ်၍ အဖြေ (၂)ဖြစ်ပါက မေးခွန်း(၁၀) သို့ ကျော်ပါ။) (၁) သိပါတယ်။ (၂) မသိပါ။	_ _
၉။	သွေးသွင်းရန် လိုအပ်သော လူနာများအတွက် သွေးထောက်ပံ့မှုကို မည်သည်မှ ရရှိပါသလဲ။ (တစ်ခုထက်ပို၍ဖြေဆိုနိုင်ပါသည်။) (၁) စေတနာ သွေးလှူရှင်များ မှ (၂) မိသားစုဝင်များ မှ သွေးလှူဒါန်းပေးခြင်း မှ (၃) အခကြေးငွေ ယူ၍ သွေးလှူဒါန်းပေးခြင်း မှ (၄) သွေးလှူဘဏ် မှ (၅) အခြား(ဖော်ပြပါ) -----	_ _ _ _ _ _ _ _ _ _
၁၀။	သွေးလှူဒါန်းရန် သင့်တော်သော အသက်အရွယ်ကို ဖော်ပြပါ။ (၁) ၁၆ - ၆၀ နှစ် (၂) ၁၈ - ၆၀ နှစ် (၃) ၁၈ - ၆၅ နှစ် (၄) မသိပါ။ (၅) အခြား(ဖော်ပြပါ) -----	_ _
၁၁။	သွေးလှူဒါန်းရန် သင့်တော်သော ကိုယ်အလေးချိန်ကို ဖော်ပြပါ။ (၁) ကျား/ မ မရွေး ပေါင် (၁၀၀) ပြည့်ရန် လိုသည်။ (၂) ကျား/ မ မရွေး ပေါင် (၁၁၀) ပြည့်ရန် လိုသည်။ (၃) မ အတွက် ပေါင် (၁၀၀) နှင့် ကျား အတွက် ပေါင် (၁၁၀) ပြည့်ရန် လိုသည်။ (၄) မသိပါ။ (၅) အခြား(ဖော်ပြပါ) -----	_ _

၁၂။	<p>သွေးလှူဒါန်းရန် သင့်တော်သော ပုံမှန်သွေးပေါင်ချိန်ကို ဖော်ပြပါ။</p> <p>(၁) ၁၀၀/၆၀ - ၁၅၀/၉၀ mmHg</p> <p>(၂) ၁၁၀/၆၀ - ၁၅၀/၉၀ mmHg</p> <p>(၃) ၁၀၀/၆၀ - ၁၄၀/၉၀ mmHg</p> <p>(၄) မသိပါ။</p> <p>(၅) အခြား(ဖော်ပြပါ) -----</p>	_ _
၁၃။	<p>သွေးလှူဒါန်းရန် သင့်တော်သော ပုံမှန်သွေးနီအားအဆင့်(Haemoglobin Level) ကို ဖော်ပြပါ။</p> <p>(၁) ၁၁.၅ G% ထက် မနည်း ရှိရမည်။</p> <p>(၂) ၁၂.၅ G% ထက် မနည်း ရှိရမည်။</p> <p>(၃) ၁၅.၅ G% ထက် မနည်း ရှိရမည်။</p> <p>(၄) မသိပါ။</p> <p>(၅) အခြား(ဖော်ပြပါ) -----</p>	_ _
၁၄။	<p>လူတစ်ဦး သွေးလှူဒါန်းသည့်အခါ တစ်ကြိမ်လျှင် သွေးပမာဏ မည်မျှ ထုတ်ယူ လှူဒါန်း နိုင်ပါသလဲ။</p> <p>(၁) ၅၀၀ ml အောက်</p> <p>(၂) ၅၀၀ ml - ၁၀၀၀ ml အတွင်း</p> <p>(၃) မသိပါ။</p>	_ _
၁၅။	<p>တစ်ကြိမ် သွေးလှူဒါန်းရန် အတွက် အချိန် မည်မျှ ပေးရပါသလဲ။</p> <p>(၁) မိနစ် ၂၀ အောက်</p> <p>(၂) မိနစ် ၂၀ မှ မိနစ် ၆၀ အတွင်း</p> <p>(၃) မသိပါ။</p> <p>(၄) အခြား(ဖော်ပြပါ) -----</p>	_ _
၁၆။	<p>လူတစ်ဦးသည် တစ်နှစ်လျှင် ဘယ်နှစ်ကြိမ် သွေးလှူဒါန်း နိုင်ပါသလဲ။</p> <p>(၁) ၂ ကြိမ်</p> <p>(၂) ၃ ကြိမ်</p> <p>(၃) ၄ ကြိမ်</p> <p>(၄) မသိပါ။</p>	_ _
၁၇။	<p>တစ်ကြိမ် သွေးလှူဒါန်းပြီး ကုန်ဆုံးသွားသော သွေးပမာဏကို ပြန်ဖြည့်ရန် အချိန် မည်မျှ လိုပါသလဲ။</p> <p>(၁) ၂၄ နာရီ အတွင်း</p> <p>(၂) ၂၄ နာရီ မှ ၃၆ နာရီ အတွင်း</p> <p>(၃) ၂ ပတ် မှ ၃ ပတ် အတွင်း</p> <p>(၄) ၃ လ မှ ၄ လ အတွင်း</p> <p>(၅) မသိပါ။</p>	_ _

၁၈။	<p>အောက်ပါ မေးခွန်းများကို မှန်/မှား ဖြေပေးပါ။ (မေးခွန်းအားလုံး ဖြေဆိုပါ။)</p> <p>(မှန်ပါက- ၁၊ မှားပါက- ၂၊ မသိပါက- ၇)</p> <p>(၁) ဖျားနေသူသည် သွေးလှူဒါန်း နိုင်သည်။</p> <p>(၂) လွန်ခဲ့သော ၁နှစ်အတွင်း သွေးသွင်းခံရဖူးသူသည် သွေးလှူဒါန်း နိုင်သည်။</p> <p>(၃) ဓာတ်မတည့်မှု တစ်ခုခု ဖြစ်နေသူသည် သွေးလှူဒါန်း နိုင်သည်။</p> <p>(၄) ဆေးလိပ်သောက်သူသည် သွေးလှူဒါန်း နိုင်သည်။</p> <p>(၅) တာရှည်စွာ အရက်သောက်သူသည် သွေးလှူဒါန်း နိုင်သည်။</p> <p>(၆) HIV ပိုးရှိသူသည် သွေးလှူဒါန်း နိုင်သည်။</p> <p>(၇) အသည်းရောင်နေသူသည် သွေးလှူဒါန်း နိုင်သည်။</p>	<p> _ _ </p> <p> _ _ </p> <p> _ _ </p> <p> _ _ </p> <p> _ _ </p> <p> _ _ </p> <p> _ _ </p>
၁၉။	<p>ပုံမှန် စေတနာ သွေးလှူဒါန်းခြင်းကြောင့် သွေးလှူရှင်၏ ကျန်းမာရေးအတွက် အကျိုးရှိစေပါသလား။</p> <p>(၁) အကျိုးရှိပါသည်။</p> <p>(၂) အကျိုးမရှိပါ။</p> <p>(၃) မသိပါ။</p>	<p> _ _ </p>
၂၀။	<p>သွေးသွင်းကုသမှု မှတဆင့် ရောဂါ ကူးစက်ခံရခြင်း ရှိနိုင်ပါသလား။ (အကယ်၍ အဖြေ (၂)/(၃) ဖြစ်ပါက မေးခွန်း(၈) သို့ ကျော်ပါ။)</p> <p>(၁) ရှိနိုင်ပါသည်။</p> <p>(၂) မရှိနိုင်ပါ။</p> <p>(၃) မသိပါ။</p>	<p> _ _ </p>
၂၁။	<p>သွေးသွင်းကုသမှု မှတဆင့် ကူးစက်နိုင်သော ရောဂါများကို ဖော်ပြပါ။</p> <p>(တစ်ခုထက်ပို၍ဖြေဆိုနိုင်ပါသည်။)</p> <p>(၁) HIV-AIDS ရောဂါ</p> <p>(၂) အသည်းရောင် အသားဝါ ဘီရောဂါ</p> <p>(၃) အသည်းရောင် အသားဝါ စီရောဂါ</p> <p>(၄) ကာလသား ရောဂါ</p> <p>(၅) ငှက်ဖျား ရောဂါ</p> <p>(၆) အခြား(ဖော်ပြပါ) -----</p>	<p> _ _ </p> <p> _ _ </p> <p> _ _ </p> <p> _ _ </p> <p> _ _ </p> <p> _ _ </p>

(ဂ) သွေးလှူဒါန်းခြင်းနှင့်သက်ဆိုင်သော သဘောထားဆိုင်ရာအချက်များ (Attitude)						
		လုံးဝသဘောမတူပါ	အနည်းငယ်သဘောမတူပါ	သဘောတူသည်လည်းမဟုတ်၊ သဘောမတူသည်လည်းမဟုတ်ပါ။	အနည်းငယ်သဘောတူပါသည်။	လုံးဝသဘောတူပါသည်။
၁	သွေးလှူဒါန်းခြင်းသည် မွန်မြတ်သော ကုသိုလ်ကောင်းမှု တစ်ခု ဟု ထင်မြင်ယူဆပါသည်။	၁	၂	၃	၄	၅
၂	သွေးလှူရှင်များအားလုံးသည် စေတနာ သွေးလှူရှင်များ ဖြစ်သည်။	၁	၂	၃	၄	၅
၃	သွေးလှူရှင်များအား သွေးလှူဒါန်းစေရန် အတွက် မက်လုံးပေးရန် လိုအပ်သည်။	၁	၂	၃	၄	၅
၄	သွေးလှူရှင်များအား သွေးလှူဒါန်းစေရန် အတွက် ကုန်ကျစရိတ် (ခရီး စရိတ်/ စားသောက်စရိတ်) ပြန်လည်ထောက်ပံ့ရန် လိုအပ်သည်။	၁	၂	၃	၄	၅
၅	သွေးလှူဒါန်းခြင်းကြောင့် သွေးလှူရှင်အတွက် ကျန်းမာရေးကို မထိခိုက်စေပါ။	၁	၂	၃	၄	၅
၆	သွေးလိုအပ်သောလူနာမှ အကူအညီ တောင်းခံမှသာလျှင် သွေးလှူဒါန်းသင့်ပါသည်။	၁	၂	၃	၄	၅
၇	သွေးလှူဒါန်းခြင်းကြောင့် သွေးလှူရှင်၏ ကိုယ်ခံအား ကျစေသည်။	၁	၂	၃	၄	၅
၈	သွေးလှူဒါန်းခြင်းသည် ခန္ဓာကိုယ်၏ ခွန်အားကို ယုတ်လျော့ စေသည်။	၁	၂	၃	၄	၅
၉	သွေးလှူဒါန်းခြင်းသည် သွေးအားနည်းစေပါသည်။	၁	၂	၃	၄	၅
၁၀	မိမိသည် နောင်တွင်သွေးလှူဒါန်းရန် ဆန္ဒရှိပါသည်။	၁	၂	၃	၄	၅
၁၁	မိမိသည် မိမိ၏ မိသားစုဝင်နှင့် ဆွေမျိုးသားချင်းများကို သွေးလှူဒါန်းရန် တိုက်တွန်းပါမည်။	၁	၂	၃	၄	၅

(ဃ)	သွေးလှူဒါန်းခြင်းနှင့်သက်ဆိုင်သော အမှုအကျင့်ဆိုင်ရာအချက်များ၊ လှုံ့ဆော်မှုနှင့် အဟန့်အတားဆိုင်ရာအချက်များ	
၁။	<p>သင် သွေးလှူဒါန်း ဖူးပါသလား။ (အကယ်၍ အဖြေ (၂)ဖြစ်ပါက မေးခွန်း(၅) သို့ ကျော်ပါ။)</p> <p>(၁) လှူဒါန်း ဖူးပါသည်။</p> <p>(၂) မလှူဒါန်း ဖူးပါ။</p>	_
၂။	<p>လှူဒါန်းဖူးပါက ဘယ်နှစ်ကြိမ် သွေးလှူဒါန်း ဖူးပါသလဲ။</p> <p>(၁) ၁ ကြိမ်</p> <p>(၂) ၂ ကြိမ် မှ ၅ ကြိမ်</p> <p>(၃) ၆ ကြိမ် မှ ၁၀ ကြိမ်</p> <p>(၄) ၁၀ ကြိမ် အထက်</p>	_
၃။	<p>ဘယ်တုန်းက နောက်ဆုံး လှူဒါန်းခဲ့ပါသလဲ။</p> <p>(၁) ၁ နှစ်ကျော်</p> <p>(၂) ၁ နှစ်</p> <p>(၃) ၁ နှစ်အောက်</p>	_
၄။	<p>သွေးလှူဒါန်း ပြီးနောက် သင်မည်သို့ ခံစား ရပါသလဲ။</p> <p>(၁) သက်တောင့်သက်သာ ရှိပါသည်။</p> <p>(၂) ကြောက် ပါသည်။</p> <p>(၃) စိတ်တို ပါသည်။</p> <p>(၄) မည်သို့မှ မခံစားရပါ။</p>	_
၅။	<p>လိုအပ်ပါက (သို့မဟုတ်) အကူအညီ တောင်းလာပါ သင်သည် သွေးလှူဒါန်းပေးရန် ဆန္ဒ ရှိပါသလား။</p> <p>(၁) ဆန္ဒ ရှိပါသည်။</p> <p>(၂) ဆန္ဒ မရှိပါ။</p>	_
၆။	<p>သင်သည် မည်သည့်အကြောင်းရင်း များကြောင့် သွေးလှူဒါန်းပါသလဲ။</p> <p>(တစ်ခုထက်ပို၍ ဖြေဆိုနိုင်ပါသည်။)</p> <p>(၁) ပရဟိတစိတ်/အများအကျိုး ဆောင်ချင်သောကြောင့်</p> <p>(၂) သွေးလိုအပ်နေသော သူငယ်ချင်းများ၊ ဆွေမျိုးများကို ကူညီလိုသောကြောင့်</p> <p>(၃) မိမိစေတနာအလျောက် လှူဒါန်း လိုသောကြောင့်</p> <p>(၄) အခကြေးငွေ၊ လက်ဆောင်ပစ္စည်းများ ရလိုသောကြောင့်</p> <p>(၅) မိမိ၏ ကျန်းမာရေး အခြေအနေကို စစ်ဆေးလိုသောကြောင့်</p> <p>(၆) အခြား(ဖော်ပြပါ) -----</p> <p>-</p>	_ _ _ _ _ _
၇။	<p>သင်သည် ပုံမှန် အမြဲတမ်း (လွန်ခဲ့သော ၂နှစ်အတွင်း ၄ ကြိမ် (သို့) ၄ ကြိမ်နှင့် အထက်) သွေးလှူဒါန်း ဖြစ်ပါသလား။ (အကယ်၍ အဖြေ (၁)ဖြစ်ပါက မေးခွန်း(၈) သို့မေးပါ။ အဖြေ (၂)ဖြစ်ပါက မေးခွန်း(၉) သို့မေးပါ။)</p> <p>(၁) ဖြစ်ပါသည်။</p> <p>(၂) မဖြစ်ပါ။</p>	_

၈။	<p>ပုံမှန် အမြဲတမ်း သွေးလှူဒါန်းခြင်းကို လှုံ့ဆော်အားပေးသော အချက်များမှာ- (တစ်ခုထက်ပို၍ ဖြေဆိုနိုင်ပါသည်။)</p> <p>(၁) သွေးလှူဒါန်းခြင်းသည် မိမိအတွက် အရေးကြီးသော အကြောင်းရင်း ဖြစ်သည်။</p> <p>(၂) သွေးလှူဒါန်းခြင်းသည် မိမိအား အများက လိုအပ်သည်ဟု ခံစားရစေသည်။</p> <p>(၃) သွေးလှူဘဏ်တံဆိပ် (သို့မဟုတ်) သွေးလှူသည့်ကြော်ငြာများကို မြင်တိုင်း ပျော်ရွှင်မှုကို ခံစားရစေသည်။</p> <p>(၄) သွေးလိုအပ်သည့်လူနာများကို အလွန်အမင်း သနားမိသောကြောင့် သွေးလှူဒါန်း ဖြစ်သည်။</p> <p>(၅) အခြားသူများကို ကူညီရန် အရေးကြီးသောကြောင့် သွေးလှူဒါန်း ဖြစ်သည်။</p> <p>(၆) သွေးလှူဒါန်းခြင်းဖြင့် မိမိ၏ သန်မာမှုအားရှိမှုကို ပြနိုင်သည်။</p> <p>(၇) သွေးလှူဒါန်းခြင်းဖြင့် မိမိ၏ ကျန်းမာရေးကို ကောင်းစေသည်ဟု ယူဆသည်။</p> <p>(၈) သွေးလှူဒါန်းခြင်း၏ အရေးကြီးသော အကြောင်းရင်း တစ်ခုမှာ ကျန်းမာရေး အခမဲ့ စစ်ဆေးနိုင်သောကြောင့် ဖြစ်သည်။</p> <p>(၉) မိမိအတွက် သွေးလှူဒါန်းခြင်းသည် အခြေခံ လူ့ကျင့်ဝတ်ဟု ခံယူထားသည်။</p> <p>(၁၀) အခြား(ဖော်ပြပါ) -----</p>	<p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p>
၉။	<p>ပုံမှန် အမြဲတမ်း သွေးမလှူဒါန်းနိုင်သော အကြောင်းရင်း များမှာ- (တစ်ခုထက်ပို၍ ဖြေဆိုနိုင်ပါသည်။)</p> <p>(၁) သွေးလှူဒါန်းခြင်းသည် အချိန်ကုန်သောကြောင့်</p> <p>(၂) သွေးကိုမြင်လျှင် ကြောက်တတ်သောကြောင့်</p> <p>(၃) မိဘတို့က ခွင့်မပြုသောကြောင့်</p> <p>(၄) သွေးလှူဒါန်းခြင်းသည် အားနည်းမူးဝေ စေသောကြောင့်</p> <p>(၅) အသည်းရောင်အသားဝါရောဂါ၊ HIV-AIDS ရောဂါ စသော ကူးစက်နိုင်သော ရောဂါများ ကူးစားစိုးရိမ်သောကြောင့်</p> <p>(၆) အပ်ကို ကြောက်သောကြောင့်</p> <p>(၇) သွေးလှူရှင်အဖြစ်မှ ငြင်းပယ် ခံရမှုစိုးရိမ်သောကြောင့်</p> <p>(၈) သွေးလှူဘဏ်နှင့် ဝေးသောကြောင့်</p> <p>(၉) နောင်တွင် သူငယ်ချင်းများ၊ ဆွေမျိုးများ သွေးလိုအပ်ပါက လှူနိုင်ရန်</p> <p>(၁၀) သွေးလှူဒါန်းရန်အတွက် ကုန်ကျစရိတ် (ခရီး၊ စရိတ်/ စားသောက်စရိတ်) များသောကြောင့်</p> <p>(၁၁) အခြား(ဖော်ပြပါ) -----</p>	<p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p> <p>┆┆┆</p>

၁၀။	<p>အချို့လူများ သွေးလှူဒါန်းရန် ဆန္ဒ မရှိသည်မှာ ဘာကြောင့်ဟု သင်ထင်ပါသလဲ။ (တစ်ခုထက်ပို၍ ဖြေဆိုနိုင်ပါသည်။)</p> <p>(၁) သွေးနီအား မပြည့်မှာစိုးသောကြောင့် (၂) ကူးစက်ရောဂါများ ရှိနေသည်ကို စစ်ဆေးတွေ့ရှိမှာစိုးသောကြောင့် (၃) သွေးလှူဒါန်းခြင်းဖြင့် ကူးစက်နိုင်သော ရောဂါများ ကူးစက်ခံရမှာ စိုးသောကြောင့် (၄) သွေးလှူဒါန်းခြင်းအကြောင်း မသိသောကြောင့် (၅) အားနည်းမူးဝေမှာ ကြောက်သောကြောင့် (၆) သွေးလှူဒါန်းခြင်းနှင့် မနီးစပ်သောကြောင့် (၇) လှူဒါန်းထားသော သွေးအား ရောင်းစားနိုင်သည်ဟု ထင်သောကြောင့် (၈) အခြား(ဖော်ပြပါ) ----- --</p>	<p>┆┆┆ ┆┆┆ ┆┆┆ ┆┆┆ ┆┆┆ ┆┆┆ ┆┆┆ ┆┆┆ ┆┆┆ ┆┆┆</p>
၁၁။	<p>စေတနာ သွေးလှူရှင်များ ပိုမိုများပြား လာစေရန် သွေးလှူဘဏ်များတွင် မည်သို့ ဆောင်ရွက် သင့်သည်ဟု သင်ထင်ပါသလဲ။ (တစ်ခုထက်ပို၍ ဖြေဆိုနိုင်ပါသည်။)</p> <p>(၁) သွေးလှူဒါန်းခြင်း၏ အရေးကြီးသော အကြောင်းရင်းကို ပညာပေး လှုပ်ရှားမှုများ ပြုလုပ်ရန် (၂) သွေးလှူရှင်များ ယုံကြည်နိုင်လောက်သော ကိုယ်ရေး လှို့ဝှက်မှု ထိန်းသိမ်းရန် (၃) သွေးလှူရှင်များအား မက်လုံး(အခကြေးငွေ/လက်ဆောင်ပစ္စည်း)များ ပေးရန် (၄) တီဗွီ/ ရေဒီယို/ လူမှုကွန်ယက်များတွင် သွေးလှူဒါန်းခြင်းနှင့် ပတ်သတ်သည့် ကြော်ငြာများ ထည့်ရန် (၅) သွေးလှူဘဏ်ရှိဝန်ထမ်းတိုင်းလုပ်ငန်းကျွမ်းကျင်မှု နှင့်ဆက်ဆံရေးကောင်းရန် (၆) သွေးလှူဘဏ်များသည် သန့်ရှင်းပြီး လာချင်စဖွယ် နေရာများ ဖြစ်ရန် (၇) သွေးလှူဘဏ်များသည် လက်လှမ်းမီသော ဆေးရုံများတွင်ရှိရန် (၈) သွေးလှူရှင်များအားကုန်ကျစရိတ်(ခရီး စရိတ်/ စားသောက်စရိတ်)ပေးရန် (၉) အခြား(ဖော်ပြပါ) -----</p>	<p>┆┆┆ ┆┆┆ ┆┆┆ ┆┆┆ ┆┆┆ ┆┆┆ ┆┆┆ ┆┆┆ ┆┆┆ ┆┆┆ ┆┆┆ ┆┆┆</p>

ANNEX (3)

Perception, Motivators and Deterrents on Blood Donation among Blood Donors at Central Women’s Hospital (Yangon), 2019

Date _____

Respondent ID _____

No	Questions	Code
A	Socio-demographic Characteristics	
1.	Age (in completed year)-----	_ _
2.	Sex (1) Male (2) Female	_ _
3.	Religion (1) Buddhist (2) Christian (3) Islam (4) Hindu (5) Others(specify)-----	_ _
4.	Ethnic group (1) Burma (2) Shan (3) Karen (4) Mon (5) Rakhine (6) Others (specify)-----	_ _
5.	Marital Status (1) Single (2) Married (3) Divorced/ Separated (4) Widower/ Widow	_ _
6.	Residence (1) State /Region ----- (2) Township ----- (3) Urban /Rural	_ _ _ _ _ _

7.	Educational level (highest level of attended school) (1) Illiterate (2) Only read & write (3) Primary school (4) Middle school (5) High school (6) University (7) Graduate and Post-Graduate	
8.	Occupation (1) Dependent / Un-employee/ Housewife (2) Government Employee (3) Company Employee (4) Self-employee (5) Student (6) Others(specify)_____	
B. Knowledge of Blood Donation		
1.	Do you know the common blood group? (If(2), skip to Q (3)) (1) Yes (2) No	
2.	How many common blood groups are there which you know? Please mention. _____	
3.	Do you know your blood group? (If(2), skip to Q (5)) (1) Yes (2) No	
4.	Please mention your blood group. (1) Blood group A (2) Blood group B (3) Blood group AB (4) Blood group O	
5.	Have you ever heard about blood donation? (If(2), skip to Q (7)) (1) Yes (2) No	
6.	If yes, what is your source of information? (* multiple response) (1) I have received transfusion in the past (2) Advertisements in TV/ Radio/ Internet/ Newspaper/ Journals/ Posters/ Pamphlets (3) From relatives/ friends/ neighbors (4) Voluntary Blood Donors (5) Others (Specify) _____	

7.	Can human blood be manufactured artificially? (1) Yes (2) No (3) Do not know	_ _
8.	Do you know source to give blood for those who need blood supply? (If(2), skip to Q (10)) (1) Yes (2) No	_ _
9.	What are sources for blood supply to the patient who need blood? (*multiple response) (1) Voluntary blood donors (2) Family donors (3) Paid donors (4) Blood bank (5) Others (Specify) _ _ _ _ _	_ _ _ _ _ _ _ _ _ _
10.	What is the age of eligibility for blood donation? (1) 16 - 60 years (2) 18 - 60 years (3) 18 – 65 years (4) Do not know (5) Others (Specify) _ _ _ _ _	_ _
11.	Minimum weight eligibility for blood donation is (1) 100 lb for both sex (2) 110 lb for both sex (3) 100 lb for women and 110 lb for men (4) Do not know (5) Others (Specify) _ _ _ _ _	_ _
12.	Normal blood pressure to donate blood is (1) 100/60 mmHg -150/90 mm Hg (2) 110/60 mmHg -150/90 mm Hg (3) 100/60 mmHg -140/90mm Hg (4) Do not know (5) Others (Specify) _ _ _ _ _	_ _
13.	What should be the hemoglobin level for a person to donate blood? (1) Not less than 11.5 g% (2) Not less than 12.5 g% (3) Not less than 15.5 g% (4) Do not know (5) Others (Specify) _ _ _ _ _	_ _
14.	What volume of blood can a person donate during each donation? (1) Less than 500 ml (2) 500-1000 ml (3) Do not know	_ _

15.	<p>What is the duration of a donation process?</p> <p>(1) Less than 20 minutes (2) 20 – 60 minutes (3) Do not know (4) Others (Specify) _ _ _ _ _</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
16.	<p>How often can an individual donate blood in a year?</p> <p>(1) 2 times (2) 3 times (3) 4 times (4) Do not know</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
17.	<p>What is the time taken for volume of blood to be replaced after a single donation?</p> <p>(1) Within 24 hours (2) 24-36 hours (3) 2-3 weeks (4) 3-4 months (5) Do not know</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
18.	<p>Say yes or no for the following questions. (*answer all questions) (If Yes-1, No-2, Do not know-7)</p> <p>(1) Can one donate blood during fever? (2) Can a donation be done by a person who is receiving blood transfusion within previous one year? (3) Can a person having allergy donate blood? (4) Can a smoker donate blood? (5) Can a person with chronic alcoholism donate blood? (6) Can People who are known HIV positive donate blood? (7) Can People with Hepatitis donate blood?</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
19.	<p>Does regular voluntary blood donation have medical benefits?</p> <p>(1) Yes (2) No (3) Do not know</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
20.	<p>Can a person be infected by receiving blood transfusion?(If(2), skip to Q(C))</p> <p>(1) Yes (2) No (3) Do not know</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
21.	<p>What diseases are transmissible by blood transfusion? (* multiple response)</p> <p>(1) HIV (2) HBV (3) HCV (4) Syphilis (5) Malaria (6) Others (Specify) _ _ _ _ _</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

C. Attitude towards Blood Donation

	Statement	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1.	I think that blood donation is a noble meritorious conduct	1	2	3	4	5
2.	All blood donors are voluntary blood donors.	1	2	3	4	5
3.	There is a need to give incentives to those who donate blood.	1	2	3	4	5
4.	There is a need to give cost (travel cost, food cost) to those who donate blood	1	2	3	4	5
5.	Due to blood donation, blood donors cannot harm.	1	2	3	4	5
6.	Blood donors should donate blood only when a patient request to donate	1	2	3	4	5
7.	Donating blood lower donor's Immunity.	1	2	3	4	5
8.	Blood donation makes donors weak.	1	2	3	4	5
9.	Blood donation may lead to anemia.	1	2	3	4	5
10.	I am willing to donate blood in the future.	1	2	3	4	5
11.	I encourage relatives to donate.	1	2	3	4	5

D.	Practice, Motivators and Deterrents of Blood donation	
1.	Have you ever donated blood? (If(2), skip to Q (5)) (1) Yes (2) No	_ _
2.	If yes, how many times? (1) 1 time (2) 2 - 5 times (3) 6 – 10 times (4) Above 10 times	_ _
3.	When was the last time you have donated blood? (1) More than 1 year (2) 1 year (3) Less than 1 year	_ _
4.	How do you feel after donating blood? (1) Comfortable (2) Fear (3) Anger (4) Indifferent	_ _
5.	Willingness to donate blood if asked or reminded to do so. (1) Yes (2) No	_ _
6.	For you, what are the reasons for donating blood? (* multiple response) (1) Altruism / Doing good to others (2) For helping friends/relatives who need blood (3) Voluntary (4) Remuneration (5) To know my screening status (6) Others (Specify) _ _ _ _ _	_ _ _ _ _ _ _ _ _ _ _ _
7.	Are you a regular voluntary donor (4 times or above 4 times of voluntary blood donation within previous 2 years)? (If(1), skip Q (9) and If(2), skip Q (8)) (1) Yes (2) No	_ _
8.	Motivators for regular blood donation are _ _ _ (* multiple response) (1) Blood donation is a cause that is important to me (2) Donation of blood makes me feel needed (3) I get a good feeling whenever I see the blood bank logo, or an advertisement for blood donation (4) I donate because I feel great compassion towards the receivers of blood products (5) I donate blood because it is important to help other people (6) By donating blood I can explore my own strengths (7) I think blood donation benefits my own health (8) An important reason for donation is that I get a health check for free (9) For me blood donation is primarily a moral duty (10) Others (Specify) _ _ _ _ _	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

9.	<p>Reasons for not donating blood regularly. (* multiple response)</p> <p>(1) Blood donation is time consuming</p> <p>(2) The frightening sight of blood</p> <p>(3) Parents do not allowed</p> <p>(4) Blood donation causes weakness and fainting</p> <p>(5) Fear of contracting diseases like hepatitis, HIV etc</p> <p>(6) The fear of needle pricks</p> <p>(7) Fear of being rejected as a donor</p> <p>(8) Far from a blood bank</p> <p>(9) Need to donate for friends or relatives in future</p> <p>(10) Due to high cost (travel cost, food cost) for blood donation</p> <p>(11) Others (specify) _ _ _ _ _</p>	<p> </p> <p> </p> <p> </p> <p> </p> <p> </p> <p> </p> <p> </p> <p> </p> <p> </p> <p> </p> <p> </p>
10.	<p>Why do you think some people are not willing to donate blood? (* multiple response)</p> <p>(1) Fear of not having enough blood</p> <p>(2) Fear of being tested for infectious disease</p> <p>(3) Fear of contracting infectious diseases</p> <p>(4) Ignorance of information on blood donation</p> <p>(5) Fear of fainting/ weak</p> <p>(6) Not approached to donate</p> <p>(7) They thought that donated blood may be sold</p> <p>(8) Others (specify) _ _ _ _ _</p>	<p> </p> <p> </p> <p> </p> <p> </p> <p> </p> <p> </p> <p> </p> <p> </p>
11.	<p>What do you think your blood bank can do in order to encourage more people to be blood donors? (* multiple response)</p> <p>(1) Carrying out educational campaigns on importance of blood donation</p> <p>(2) Assuring donors of maximum confidentiality after blood samples are tested</p> <p>(3) Give incentives to blood donors</p> <p>(4) Put up advertisement on TV, radio, website on blood donation</p> <p>(5) There should be staffs who are skillful in both technical and communication</p> <p>(6) Make blood banks clean and nice places to go to</p> <p>(7) There should be blood banks in accessible hospitals</p> <p>(8) Paying the cost of blood donation (travel cost, food cost) to blood donors</p> <p>(9) Others (specify) _ _ _ _ _</p>	<p> </p> <p> </p> <p> </p> <p> </p> <p> </p> <p> </p> <p> </p> <p> </p>

ANNEX (4)

ဗဟို အမျိုးသမီး ဆေးရုံကြီး (ရန်ကုန်) ရှိ သွေးလှူရှင်များ၏ သွေးလှူဒါန်းခြင်းနှင့် သက်ဆိုင်သော ခံယူချက်၊ သဘောထားဆိုင်ရာ အချက်များ၊ လှုံ့ဆော်မှုနှင့်

အဟန့်အတားဆိုင်ရာအချက်များ (၂၀၁၉)

In-Depth Interview Guide

ဆေးရုံအမည် - ဗဟို အမျိုးသမီး ဆေးရုံကြီး (ရန်ကုန်)

ကျွန်မသည် ပြည်သူ့ကျန်းမာရေးတက္ကသိုလ်တွင် သင်တန်း တက်ရောက်နေသော သင်တန်းသူ ဒေါက်တာမေဇော်ထွန်း ဖြစ်ပါသည်။ ကျွန်မသည် သင်တန်း၏လိုအပ်ချက်ဖြစ်သော သုတေသနစာတမ်းတင်သွင်းရန်အတွက် ဗဟို အမျိုးသမီးဆေးရုံကြီး (ရန်ကုန်)တွင် သွေးလာရောက် လှူဒါန်းသော သွေးလှူရှင်များ၏ သွေးလှူဒါန်းခြင်းနှင့်ပတ်သက်သော ခံယူချက်၊ သဘောထားဆိုင်ရာ အချက်များ၊ လှုံ့ဆော်မှုနှင့် အဟန့်အတားဆိုင်ရာ အချက်များအား သုတေသနပြုလုပ်ခြင်း ဆောင်ရွက်လိုပါသည်။ ထို့ကြောင့် သင်၏ ပူးပေါင်းပါဝင်မှုအား ဖိတ်ခေါ်ပါသည်။ သင်၏အချက်အလက်များအား လုံခြုံစွာ ထိန်းသိမ်းထားရှိမည် ဖြစ်ပါသည်။ သုတေသန အဖွဲ့ဝင်များမှလွဲပြီး မည်သူ့ကိုမျှ ပေးသိလိမ့်မည် မဟုတ်ပါ။

မေးမြန်းမှုများအား ပြန်လည်ဆန်းစစ်ရန်အတွက် သင်ခွင့်ပြုပါက အသံသွင်းထားမည် ဖြစ်ပါသည်။ သုတေသနပြီးဆုံးပါက အသံဖိုင်များအား ဖျက်မည်ဖြစ်ပါသည်။

လူနေမှုဘဝဆိုင်ရာ အချက်အလက်များ

- အသက်(ပြည့်ပြီးနှစ်) -
- ကျား/မ -
- ပညာအရည်အချင်း -
- အလုပ်အကိုင် -
- နေရပ် -
- အိမ်ထောင်ရှိမရှိ -
- သွေးစတင်လှူဒါန်းသောနှစ် -

Blood Donors' Perceptions about Blood Donation

သွေးလှူဒါန်းခြင်းနှင့် ပတ်သက်၍ သင်မည်သို့ထင်မြင်ယူဆ ပါသလဲ။ ဘာကြောင့်ပါလဲ။ သင်၏အမြင်ကို ရှင်းပြပေးပါ။

Blood Donors' experiences of blood donation

သွေးလှူဒါန်းခြင်းနှင့် ပတ်သက်သော အတွေ့အကြုံများကို ပြောပြပေးပါ။ သင်သည် မည်သည့်အကြောင်းရင်း များကြောင့် သွေးလှူဒါန်းပါသလဲ။ သင်၏ သွေးလှူဒါန်းခြင်းနှင့် ပတ်သက်သော မတူညီသော အတွေ့အကြုံများကို ပြောပြပေးပါ။ ဘာကြောင့်လဲ ရှင်းပြပေးပါ။

Probe

- ✓ သွေးစတင်လှူဒါန်းဖြစ်ပုံ (အချိန်၊ နေရာ၊ အကြောင်းရင်း၊ ခံစားချက်)
- ✓ ယခုအချိန်အထိ စုစုပေါင်း သွေးလှူဒါန်းသော အကြိမ်
- ✓ သွေးလှူဒါန်းသည့်အခါအဆင်ပြေ/မပြေ
- ✓ တစ်ကြိမ် သွေးလှူဒါန်းရန် အတွက် ပေးရသော အချိန်၊
- ✓ သွေးလှူရှင်၏ လိုအပ်ချက် ပြည့်မီခြင်း ရှိ/မရှိ၊
- ✓ သွေးလှူရှင်၏ လိုအပ်ချက် ပြည့်မီရန်အတွက် သွေးလှူရှင်များသည် မည်သို့ နေထိုင်ပြုမူသင့်ပါသလဲ။ ရှင်းပြပေးပါ။

Blood Donors' challenges of blood donation

သွေးလှူဒါန်းသည့်အခါ ကြုံတွေ့ရသော အခက်အခဲများ၊ အဆင်မပြေမှုများ ရှိခဲ့လျှင် ပြောပြပေးပါ။ ဘာကြောင့်လဲ ရှင်းပြပေးပါ။

Probe

- ✓ သင်သည် ပုံမှန် အမြဲတမ်း (လွန်ခဲ့သော၂နှစ်အတွင်း ၄ကြိမ် (သို့) ၄ကြိမ်နှင့်အထက်) သွေးလှူဒါန်း ဖြစ်ပါသလား။
- ✓ သင်သည် ပုံမှန် အမြဲတမ်း သွေးလှူဒါန်းဖြစ်လျှင် ထိုသို့ ပုံမှန် အမြဲတမ်း သွေးလှူဒါန်းခြင်းကို လှုံ့ဆော်အားပေးသော အချက်များကို ပြောပြပေးပါ။ ဘာကြောင့်လဲ ရှင်းပြပေးပါ။
- ✓ ပုံမှန် အမြဲတမ်း သွေးမလှူဒါန်းဖြစ်လျှင် ထိုသို့ ပုံမှန် အမြဲတမ်း သွေးမလှူဒါန်းနိုင်သော အကြောင်းရင်း များကို ပြောပြပေးပါ။ ဘာကြောင့်လဲ ရှင်းပြပေးပါ။

Sources of Blood Supply

သွေးလှူဒါန်းခြင်း အကြောင်း ဘယ်နေရာကနေကြားဖူးပါသလဲ။ လူအများသိစေရန် မည်သို့ဆောင်ရွက်သင့်သည် ဟု သင်ထင်ပါသလဲ။ ဘာကြောင့်လဲ ရှင်းပြပေးပါ။

Blood Donors' future plan and suggestions

သင်သည် နောင်တွင် သွေးလှူဒါန်းရန် ဆန္ဒ ရှိပါသလား။ သင်သည် သင့်မိသားစုဝင် ဆွေမျိုးသားချင်းများကို သွေးလှူဒါန်းရန် တိုက်တွန်း ချင်ပါသလား။

စေတနာ သွေးလှူရှင်များ ပိုမိုများပြား လာစေရန် သွေးလှူဘဏ်များတွင် မည်သို့ ဆောင်ရွက် သင့်သည်ဟု သင်ထင်ပါသလဲ။ ဘာကြောင့်ပါလဲ။ ရှင်းပြပေးပါ။

ANNEX (4)

Perception, Motivators and Deterrents on Blood Donation among Blood Donors at Central Women’s Hospital (Yangon), 2019

In-Depth Interview Guide

Name of Hospital - Central Women’s Hospital (Yangon)

Hello, Mingalabar. I am a student of University of Public Health. Now, I would like to ask you a few questions related to your blood donation practice for my research. So, I would like to invite you to participate with us. Your personal data will be confidential except the member of this research.

If you allow, I would like to record your voice for checking and reassessment. The voice record will be deleted after research.

Background information

- Age -
- Sex -
- Education -
- Occupation -
- Address -
- Marital Status -
- The year that blood donation began -

Blood Donors’ Perceptions about Blood Donation

What do you think about blood donation? Explain why?

Blood Donors’ experiences of blood donation

Please tell your experiences of blood donation. For you, what are the reasons for donating blood? Please tell your different experiences of blood donation. Explain why.

Probe

- ✓ Please specify about your first blood donation (when, where, how and why& feeling after donation).
- ✓ The times of your blood donation
- ✓ While donating blood, whether it was convenient or not?
- ✓ What is the duration of a donation process?
- ✓ Eligible or not?
- ✓ How should a blood donor behave in order to be eligible for blood donation?
Please explain.

Blood Donors' challenges of blood donation

While donating blood, do you have the experience of difficulties/inconveniences? If yes, please specify.

Probe

- ✓ Are you a regular voluntary donor (4 times or above 4 times of voluntary blood donation within previous 2 years)?
- ✓ If yes, please tell the motivators of regular voluntary blood donation.
- ✓ If no, please tell the deterrents of not donating blood regularly. Please explain why.

Sources of Blood Supply

What is your source of information about blood donation? In your opinion, how should be done to get people's awareness? Explain why?

Blood Donors' future plan and suggestions

Are you willing to donate blood in the future? Do you encourage relatives to donate?

What do you think your blood bank can do in order to encourage more people to be blood donors? Explain why?

Annex (5) Scoring System

1. Knowledge of blood donors

No.	Question	Response	Scores	Remark
1.	Do you know the common blood group?	Yes	1	
		No	0	
2.	Do you know your blood group?	Yes	1	
		No	0	
3.	Please mention your blood group	Correct	1	
		Incorrect	0	
4.	Source of information about blood donation	Can tell	1	
		Cannot tell	0	
5.	Can human blood be manufactured artificially?	Yes	1	
		No/ Do not know	0	
6.	Sources for blood supply to the patient who need blood	Both Voluntary blood donors and Blood bank	2	
		Either Voluntary blood donors or Blood bank or Other sources	1	
		Cannot tell	0	
7.	Eligible Age for blood donation	Correct	1	
		Incorrect	0	
8.	Eligible Minimum weight for blood donation	Correct	1	
		Incorrect	0	
9.	Eligible blood pressure for blood donation	Correct	1	
		Incorrect	0	
10.	Eligible Haemoglobin for blood donation	Correct	1	
		Incorrect	0	
11.	Volume of blood can a person donate during each donation	Correct	1	
		Incorrect	0	
12.	Duration of a donation process	Correct	1	
		Incorrect	0	
13.	How often can an individual donate blood in a year?	Correct	1	
		Incorrect	0	
14.	The time taken for volume of blood to be replaced after a single donation	Correct	1	
		Incorrect	0	
15.	Can one donate blood during fever?	Yes	0	
		No	1	
16.	Can a donation be done by a person who is receiving blood transfusion within previous one year?	Yes	0	
		No	1	

17.	Can a person having allergy donate blood?	Yes	0	
		No	1	
18.	Can a smoker donate blood?	Yes	1	
		No	0	
19.	Can a person with chronic alcoholism donate blood?	Yes	0	
		No	1	
20.	Can People who are known HIV positive donate blood?	Yes	0	
		No	1	
21.	Can People with Hepatitis donate blood?	Yes	0	
		No	1	
22.	Does regular voluntary blood donation have medical benefits?	Yes	1	
		No/ Do not know	0	
23.	Can a person be infected by receiving blood transfusion?	Yes	1	
		No/ Do not know	0	
24.	HIV	Yes	1	
		No	0	
25.	HBV	Yes	1	
		No	0	
26.	HCV	Yes	1	
		No	0	
27.	Syphilis	Yes	1	
		No	0	
28.	Malaria	Yes	1	
		No	0	

For concerning knowledge of blood donors, the scoring system was described with the above table. The minimum score was 0 and the maximum score was 29. After collecting data, there was not normal distribution in data set. So, the median score and above (≥ 20) will be denoted as good knowledge and below median (< 20) will be denoted as inadequate knowledge.

For concerning attitude towards blood donation among blood donors, the minimum score is 11 and the maximum score is 55. The score 44 and above will be denoted as favorable attitude and below 44 will be denoted as unfavorable attitude. The scoring system is described with the below table.

2. Scoring for Attitude towards Blood Donation

No.	Statement	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1.	I think that blood donation is a noble meritorious conduct.	1	2	3	4	5
2.	All blood donors are voluntary blood donors.	1	2	3	4	5
3.	There is a need to give incentives to those who donate blood.	5	4	3	2	1
4.	There is a need to give cost (travel cost, food cost) to those who donate blood.	1	2	3	4	5
5.	Due to blood donation, blood donors cannot harm.	1	2	3	4	5
6.	Blood donors should donate blood only when a patient request to donate	5	4	3	2	1
7.	Donating blood lower donor's Immunity.	5	4	3	2	1
8.	Blood donation makes donors weak.	5	4	3	2	1
9.	Blood donation may lead to anemia.	5	4	3	2	1
10.	I am willing to donate blood in the future.	1	2	3	4	5
11.	I encourage relatives to donate.	1	2	3	4	5

ANNEX (6) Gantt Chart

Month	August				September				October				November				December			
Week	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Protocol preparation																				
Protocol defend																				
Pilot study – Preparation for data collection																				
Data collection																				
Data entry and analysis																				
Preparation for Grand Presentation																				
Thesis preparation																				
Submission of Thesis (Draft)																				
Thesis defend																				
Correction and Submission of thesis																				

ANNEX (7)

CURRICULUM VITAE



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East District Public Health Department
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3. Assistant Surgeon, Mawlamyaing Gyun
General Hospital (5.6.2014 to 3.3.2015)
4. Assistant Surgeon, Phya Pon General
Hospital (23.5.2012 to 2.6.2013)
5. Assistant Surgeon, Yangon General
Hospital (11.1.2008 to 16.5.2012)