ADDIS ABAB UNIVERSITY

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KNOWLEDGE, ATTITUDE AND PRACTICE OF NEW STROKE PATIENTS AND THEIR CAREGIVERS TOWARDS STROKE:

A HOSPITAL BASED INTERVIEW

BY

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KNOWLEDGE, ATTITUDE AND PRACTICE OF NEW STROKE PATIENTS AND THEIR CAREGIVERS TOWARDS STROKE: A HOSPITAL BASED INTERVIEW:

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Study Summary

Background: Nearly three out of four deaths due to stroke in the world occur in low income and middle income countries – the majority are sub-Saharan African (SSA) countries. A rapidly rising stroke incidence in SSA created a large burden on the resource limited public health care. Stroke is one of the leading causes of adult onset disability in this region. Despite these impacts, very low level of awareness about stroke by the public is reported from a few studies done in SSA. In Ethiopia, there is no single study done that assesses knowledge, attitude and practice (KAP) of individuals towards stroke. Studying KAP of the victims towards stroke is essential step to improve public awareness and health care delivery system through community health education.

Objective: This study was conducted to assess the baseline KAP of new stroke patients and their attending caregivers towards stroke.

Methods & analyses: A facility – based, quantitative, cross – sectional, descriptive study was conducted. All new stroke patients and their attending caregivers were sampled from three teaching hospitals over a period of seven months. Standardized pretested mixed open ended and closed ended questionnaire was used to collect data from eligible 39 patients with new stroke and 214 caregivers of 77 new stroke patients. The questionnaire was administered face to face with in the first few hours or days after each new stroke patient's admission to medical emergency unit or general medical ward of respective hospitals. A written informed consent was obtained from each study participants before the interview. The response rate among the selected participants was more than nighty percent (90.5%). Every study participant was given a short health education about stroke at the end of the interview. Protocol approvals were obtained from the Ethical Review Committee of the Department of Neurology. Data was entered and analysed using SPSS/PC version 20.0 software packages.

Results & conclusions: Among **253** respondents **36%** identified brain as the primary organ affected by stroke. Only about 11% knew three or more stroke warning signs/symptoms. The most frequently identified stroke symptom was sudden onset unilateral extremity weakness ( ). Approximately one in five (21%) participants was able to mention three or more risk factors of stroke but **40%** respondent were unable to mention a single biologically plausible risk factor. **16%** of respondents believe that stroke is associated with spiritual possession. Those who prefer to call ambulance or a health professional for immediate help were 111(~**44%**). A large proportion (**41%**) of individuals mentioned one or more culturally plausible but potentially dangerous practices that they would provide for unconscious stroke victims. Frequently mentioned wrong practices include giving sips of water or soft drinks, putting some food in the victims mouth, and sprinkling holly water on the patients face as first aid measures. Higher level

of education and knowledge of multiple stroke risk factors were strongly associated with higher likelihood of practicing biologically plausible first aid measures. In conclusion, stroke awareness in these participants was generally low. Reports of wrong practices towards stroke were significant. There is an urgent need for public education program based on findings in this study.

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Acronyms:

AAU	Addis Ababa University
AFb	Atrial Fibrillation
AHA/ASA	American Heart Association/Stroke Association
CHF	Congestive Heart Failure
CVA	Cerebrovascular Accident
DALY	Disability Adjusted Life-Year
DM	Diabetes Mellitus
EMOPD	Emergency Medical Outpatient Department
GDB	Global Disease Burden
IHD	Ischemic Heart Disease
IRB	Institutional Review Board
KAP	Knowledge, Attitude & Practice
NCD	Non Communicable Disease
SSA	Sub-Saharan Africa
TASH	Tikur Anbessa Specialized Hospital
TIA	Transient Ischemic Stroke
WHO	World Health Organization
Y12H	Yekatit 12 Hospital
ZMH	Zewditu Memorial Hospital

Objectives

General objective:

The objective of this study is to assess level of awareness of new stroke patients & their attending caregivers in TASH, ZMH and Y12H.

Specific objective:

1. To describe knowledge, attitude and practice of new stroke patients & their attending caregivers towards stroke.
2. To identify socio-demographic determinants of KAP with regard to stroke among new stroke patients & their caregivers.

1. Introduction

1.1. Background:

Despite recent decline in incidence rate and mortality rate of stroke in developed world, the rapidly rising stroke incidence in relation to the recent epidemiological transition in Sub-Saharan Africa (SSA) has become a great socio-economic and medical burden for the region (1 – 4). Approximately 80% of global stroke mortality occurs in low and middle-income regions of the world – majority of which are SSA states (2). Stroke is one of the leading causes of death among non-communicable diseases (NCD) and the leading cause of adult onset disability in SSA (2, 3). According to WHO report, stroke related death & disability-adjusted life years (DALY) lost are estimated to be at least seven fold higher in Africa in comparison with developed countries (3, 4). Prevalence and incidence rate of stroke in Africa has become among the highest in the world. According to reports from community based studies, age-standardized prevalence rate and age-standardized incidence rate of stroke in Africa is estimated to be about 981/100,000 population and 316/100,000 population respectively (3). Moreover, the younger productive age group is more commonly affected by stroke in developing than developed regions of the globe (4). Limited data and lack of scientifically researched evidences restrain from designing cost-effective strategies that help solve the overall problem and decrease the burden related to stroke (2-4).

1.2. Statement of the problem

Preventing stroke related complications and improving outcome can be achieved through provision of immediate standard medical care and utilization of advanced therapeutic opportunities. Provision of advanced standard medical care for stroke patients largely depends on early presentation of stroke patients at hospital after stroke onset (11, 16).

About One – fourth to half of acute stroke patients in developed world present at hospital within 4 hours, which is the golden time for definitive treatment (intravascular thrombolysis) for ischemic stroke patients (11). Delayed presentation at hospital by stroke patients after stroke symptom onset is a common observed problem in Ethiopia. One study showed that the mean delay between stroke onset and hospital admission was thirty eight hours (17). Only 10% of patients were able to present at hospital within three hours of stroke onset in another study (18). Delay before hospital arrival and orally feeding unconscious patients by their care givers due to lack of awareness were considered to be important contributing factors for elevated complication rates and poor outcomes in stroke patients (17, 18). In SSA context individuals` interventions in cardiovascular risks and complications depend on the families` health decision and behavior (19).

Assessing the baseline KAP of the individuals is important step to better understand level of stroke awareness by the mass. Knowledge regarding stroke warning signs and risk factors in the general population of developing world is disappointingly very low as compared to developed countries (5, 6, 8). In spite of the fact that stroke patients and their families have experienced such a life threatening and disabling event, 10% - 35% and 11% – 43 % of stroke survivors do not know any stroke symptom and risk factor respectively (9, 13, 14)

Reaction to stroke symptoms and warning signs, by stroke victims and their families or caregivers, is dependent on their knowledge and attitude towards stroke. Increasing the population knowledge about stroke improves correct & timely identification of stroke warning signs; helps provide better pre-hospital care; and augments the body of professional knowledge**.** Peoples' knowledge affects their attitude; attitude affects practices that people undertake (16). To reduce the huge stroke impact on developing countries including Ethiopia, it is necessary to take steps on stroke prevention and to avoid delayed hospitalization of stroke patients. The first step to be taken should include improving stroke awareness of the mass through community health education after understanding their baseline level of knowledge, attitude and practices (16, 21, 22).

1.3. Significance of the study

To the investigators knowledge, there is no single study on people`s KAP in Ethiopia regarding stroke. Stroke patients themselves and their caregivers or relatives are the major role players in stroke prevention and identifying early stroke warning signs. They also affect early hospitalization after stroke symptom onset and influence decision making on subsequent treatment options. For many people, they may also serve as a source of information about stroke based on what they have learned from their experience. Assessing the baseline KAP of new stroke patients and their caregivers is important step to better understand their level of stroke awareness. It also indirectly may indicate the public level of understanding about stroke. A study like this is important first step to design strategies that reduce stroke impact. The findings from this study will help the policy makers on what areas of health education to focus & which methods to utilize to reach the mass in local context to improve public awareness & how to approach to stroke. The study can be used as a background data for future community based stroke KAP studies.

1.4. Literature Review

Worldwide stroke awareness varies significantly between countries depending on their level of development, and between population groups depending on their level of education and age among others. In a large systematic review of 39 studies done on stroke knowledge and awareness a large variability between respondents` ability to name one or more risk factors ranged from 18% to 94% for open-ended questions and from 42% to 97% for closed-ended questions (6). The variation between respondents to name one symptom ranged from 25% to 100%. The most commonly identified symptom was limb numbness, weakness or paralysis. Correct response rate was positively related with closed-ended questions (6). In Australia, in a telephone interview 73.4% of respondents identified brain as the organ injured in stroke; and smoking (39.4%) and stress (33.7) were the most common identified stroke risks. Among warning sign of stroke, "blurred and double vision or loss of vision in an eye," (24.1%) was the most common described symptom (8). The most common risk factors identified by the participants in Uganda were stress (36.6 %) and hypertension (28.9 %). Cigarette smoking was not identified by any participant as a risk factor. More than 3/4th (76%) respondents were unable to recognize stroke as a disease of the brain (7) in contrast to participants in another study in Ghana, 40% of them identified correctly brain as the organ involved in stroke (10).

Knowledge of stroke among Indian stroke patients and their relatives was assessed together. More than half of patients recognized unilateral weakness as a warning symptom (62%) and hypertension as a risk factor (54%). Better knowledge of stroke warning symptoms and correctly identifying the organ injured in stroke were correlated with higher education. Education status and younger age were correlated with higher level of stroke knowledge (15). Among Sweden post-stroke primary care patients, those taking anticoagulant drugs, only slightly more than half (56%) considered the drugs as intended for prevention, while slightly less than half (48%) of those taking platelet aggregation inhibitors recognized this was for prevention.

In the developed and some developing countries studies on stroke awareness have been done to understand baseline knowledge of the population and to design health education strategies. Some studies reassess the outcome after specific intervention programs (16, 21, 22). Among a group of black women health education intervention given using "FAST" public stroke education messages in a beauty shop significantly improved, from the baseline survey (40.7%) to post-intervention survey (50.6%), in identifying stroke warning signs (16, 21). Participants, who knew to call ambulance after the intervention increased by 8% from the baseline. Post-intervention effect sustained at least for 5 months (21).

2. MATERIALS AND METHODS

2.1. Study Design*:*

It is a facility – based, quantitative, cross – sectional, descriptive study was conducted. We used face to face interview to new stroke patients admitted to TASH, ZMH & Y12H, and their caregivers over a period of seven months, from March to September, 2017.

2.2. Study setting

Tikur Anbessa Specialized Hospital is the largest referral and teaching hospital in Ethiopia. Zewditu Memorial Hospital and Yekatit 12 Hospital are among the largest government hospitals in Addis Ababa, Ethiopia. Y12H is also a teaching hospital. Medical interns and Residents from TASH and another teaching hospital do practice in ZMH. Physicians from neurology departments of AAU see outpatient cases. There is a separate Neurology outpatient unit at TASH & ZMH for outpatient care of patients with neurological disorders. Each month on average 10 patients arrive at each of these hospitals as obtained from local documented data registered in the log books of medical emergency units. It is estimated that more than 6000 patients with neurologic disorders have regular follow up at TASH & ZMH. Among these approximately 1500 are post-stroke patients. Each month on average 10 cases with initial impression of stroke/TIA will arrive and be registered at each EMOPD of these three hospitals.

2.3. Sampling Procedure and Eligibility

2.3.1. Sampling:

The source population is all new stroke patients who are managed as inpatient and/or emergency medical outpatient department (EMOPD) and their attending caregivers. All new stroke patients who are admitted to EMOPD or general medical ward of TASH and ZMH and their attending caregivers over the study period of five months (March 1st – September 30th, 2017) are sampled.
The expected average total number of index cases (new stroke patients) over the study period was approximately estimated to be 100 based on unpublished local data and hospital registries. One or more eligible caregivers of each index case were included in the sample. In average two to three eligible attendants to each index case were expected to participate in the study.

2.3.2. Eligibility Criteria: Inclusion & exclusion criteria:

Inclusion criteria:

New Stroke patients to be included are:

- ✓ Patients who are waiting for admission or kept for observation at EMOPD of TASH and ZMH with the diagnosis of stroke/TIA
- ✓ Patients who are admitted to medical ward of TASH and ZMH with the diagnosis of stroke/TIA
- ✓ Able to give informed consent
- ✓ Age ≥ 18 years

Caregivers of stroke patients to be included are:

- ✓ Actual caregiver and supporter, who is directly involved in decision making for the patient
- ✓ An Attendant who looks after the patient majority of the times
- ✓ Close relatives who are directly involved in decision making, actual patient care and support: spouse, offspring, siblings and parents.
- ✓ An individual who is living with the patient as a household member and considered as being able to involve in decision making in the family`s issue.
- ✓ Age ≥ 18 years

Exclusion criteria:

Stroke patients excluded are:

- ✓ Cases with recurrent stroke
- ✓ Those patients who are unable to give informed consent
- ✓ Patients with impaired level of communication (aphasic, delirious, demented, confused, unconscious)
- ✓ Clinically unstable
- ✓ Age < 18 years
- ✓ Currently educated in the hospital
- ✓ Health professionals

Caregivers of new stroke patients:

- ✓ Who are unable to give informed consent
- ✓ Visitors who are neither close relatives nor actual caregivers
- ✓ Attendants who are not involved in the decision making process
- ✓ Age < 18 years old
- ✓ Current education in the hospital
- ✓ Health professionals

2.4. Data Collection

Eligible new stroke patients were coded serially as “1”, “2”, “3”, “4” and so on based on their sequential order of interview at each site. One or more eligible caregivers of each index case (stroke patients) were coded as “a”, “b”, “c”, “d”, “e” and so on for spouse (husband or wife), offspring (son/daughter), sibling (brother/sister), parents (mother/father), household member and so on. For example the first patient is coded as “1” whiles his/her caregivers are coded as “1a”, “1b”, “1c”, “1d” and so on.

Pretested structured questionnaires that were used in similar studies for the KAP of peoples towards stroke in SSA countries and India was used with some modifications by the investigators. Data collection was done by the principal investigator (PI) in collaboration with trained nurses and medical interns. Effort was made to maintain consistency between interviewers on the administering the questionnaire and recording responses. The trained data collectors initially observed while the PI was administering the questionnaire. Then they started administering the questionnaire by themselves, first observed and then independently. Each questionnaire was checked for completeness and consistency of recoding responses whenever they were submitted to the PI. Each participant’s response was rechecked for completeness during data entry to the computer; those cases with incomplete responses were discarded.

The questionnaire was administered as open ended questions through face to face interview. An Arabic number code was given for individual possible answer to each question to make data collection and entry easier. The first portion of the Questionnaire consists of socio-demographic and clinical data. The second portion of the instrument has three sub-categories: knowledge, attitude and Practice. The Knowledge section assesses: stroke awareness, risk factors and warning signs. The Attitude section details the respondents feeling towards stroke such as the relation of stroke with evil spirit and genetics, perceived benefits of traditional or religious healing for stroke. The Practice section assess what the stroke patients and their caregivers would do as a first aid measure and to get immediate help to a person with warning signs of stroke; and where do they would recommend a stroke patient to be taken for treatment.

The questionnaire is annexed to this proposal. See annex IV.

2.5 Study Variables & Operational definitions

2.5.1 Independent variables:

2.5.1.1 Socio-demographic variable:

Identification, age, sex, marital status, urban/rural residence, education level, employment, average monthly income

2.5.1.2 Clinical variables:

Previous BP level and treatment/follow up

Smoking history

Previous Heart disease

Known diabetes mellitus (DM)

2.5.2 Dependent variables:

2.5.2.1 KAP variables:

Stroke warning signs/symptoms

Target organ involved by stroke

Stroke risk factors/causes

Attitude/feeling towards stroke

Interventions as first aid measures

Preference for immediate help

Treatment recommendations for stroke patients

2.5.3 Operational Definition

Stroke: It is a rapidly developing clinical signs of focal (or global) disturbance of cerebral function, with symptoms lasting 24 hours or longer supported by brain imaging with CT scan or MRI taken after the onset of the symptoms.

Transient Ischemic Attack: A sudden onset of a focal neurologic deficit evidenced by symptom and/or sign lasting less than 24 hours presumably brought on by a transient decrease in blood supply in the absence of apparent alternative cause, and supported by brain imaging taken after the onset of the symptoms.

Ischemic Stroke: Clinical diagnosis of stroke supported by evidences of brain infarction on brain imaging taken after the onset of the symptoms.

Hemorrhagic stroke: Clinical diagnosis of stroke supported by evidences of hemorrhage into brain parenchyma and ventricles on brain imaging taken after the onset of the symptoms

Independent variable: The socio-demographic and clinical variables listed above were used as the independent variables.

Dependant variable: these are the KAP variables for which the respondents have mentioned one or more of the following: manifestations, causes/risk factors, preventive strategies, attitudes, first aid measures, preference for immediate help, and treatment recommendations variables For questions to which multiple responses are allowed, the total number of responses were counted and summed. The count sums of the dependent variables were categorized into biologically and culturally plausible responses.

Biologically plausible variables: identifying one or more of the stroke warning signs/symptoms responses among the "**FAST**" or "**Suddens**" from manifestations; hypertension, diabetes mellitus, heart disease, blood cholesterol, obesity, lack of physical exercise/sedentary life style, unhealthy diet, smoking, drinking excessive alcohol, excessive stress, and so on from risk factors/causes; treating BP, controlling blood sugar level, treating heart disease, maintaining normal blood cholesterol level, stopping smoking, maintaining normal weight, avoiding excessive alcohol drinking, taking healthy diet, practicing active life style, avoiding tress, and so on from preventive strategies; worrying about stroke related high risk of death, disability, stroke recurrence and, so on from attitude; placing an unconscious stroke subject on his/her side and head elevated position , removing food and other materials from the subject mouth, and so on from first aid measures; calling a nurse/doctor and calling ambulance from preference for

immediate help; treatment by doctor/other health professional, rehabilitation therapy, and so on from treatment recommendation were considered as biologically plausible responses.

"**Suddens**": public stroke education message. The American Heart Association/American Stroke Association (AHA/ASA) adopted this message containing a list of five stroke symptoms.

"**FAST**": public stroke education message in common use which contains a combination of three commonly identified stroke warning signs and immediate action plan when these symptoms occur.

The list of components of the "**Suddens**" and "**FAST**" is annexed to this proposal. See Annex V.

Culturally plausible variables: Sudden exposure to cold weather, evil spirit, sexual intercourse, walking alone in the dark/night, genetically transmitted and so on from causes; avoiding sexual intercourse, avoiding sudden exposure to cold weather, avoiding walking alone in the dark/night and so on from preventive strategies; worrying about doctors difficulty diagnosing and treating the problem, expensiveness of treatment, stigma, being untreatable disease and so on from attitude; sprinkling Holly water/cold water on the subjects face, giving sips or soft drinks from first aid measures; calling a religious leader or traditional healer and so on from preference for immediate help; taking over the counter drugs, religious healing methods (prayers, fasting, holly water treatment, reciting the Holly Quran on the subject), traditional healing, herbal medicines, hot spring bath, oil massage, dry needle (acupuncture), staying in holly places till the subject gets cured and so on from treatment recommendation were consider as culturally plausible responses.

2.6 Data analysis and statistical methods

Data was entered and analysed using SPSS/PC version 20.0 software packages for statistical analysis, IBM Company /International Business Machines / IBM. Com, U.S.A. The socio-demographic and clinical characteristics of the stroke patients and their caregivers were categorized and frequencies were calculated.

Knowledge part was analysed in terms of absolute number of correct responses to a question, so that it can be determined what percentage of the population knows 0, 1, 2, 3, 4, and so on stroke symptoms, risk factors, treatment options or preventive strategies. Diagrams & Tabular illustrations are used to show the percentage of those knowing each individual major risk factor, warning signs, treatment options or preventive strategies. The percentage of people knowing multiple risk factors, warning signs, treatment options or preventive strategies are also shown. Overall knowledge of the respondents and characteristics of highly knowledgeable members and

those who lack knowledge are also shown. Knowledge difference between groups and determing factors are also shown. Analysis of behavior or practice of participants was conducted similarly using frequencies. Analysis of attitude responses was tailored to the specific nature of each question.

Then the percent of responses and percent of cases for each predefined multiple response sets were calculated. The biologically and culturally plausible KAP variables were assessed for correlation by cross tabulation. Then statistical significance of associations was done using chi-square test with level significance 5% and 95 % confidence interval. Similarly correlation among the KAP variables and continuous socio-demographic & clinical variables such as age were determined using Spearman's correlation at $P<0.05$.

2.7 Ethical Issue

Protocol approvals were obtained from the ethical review Committee of the Department of Neurology.

Informed written consent was obtained from each study subjects. Participant information sheet and informed consent was prepared in English and Amharic versions. Included in the participant information sheet are: general information about the study significance and objective, address of the investigator and advisors, address of responsible bodies in case participants may feel that ethical conduct is broken by the investigator, any compensation for participation, rights of and risks for study participants, and confidentiality of personal information. For study subjects who cannot read or understand the prepared versions of the participant information sheet and written consent, it was read aloud, translated and explained by a person of their own choice to do so.

Data was collected in the specified period from participants who signed in the informed consent form provided to participate in the study.

Confidentiality was maintained throughout the research process. Completeness of each questionnaire was checked, assigned a code, and kept in a secured file. Data was cleaned and entered in password protected electronic database. Every study participant was given a short health education about stroke at the end of the interview.

2.8 RESULT AND DISCUSSION

A total of three hundred and twenty six (326) participants – seventy seven (77) new stroke patients and two hundred and forty nine (249) attending caregivers of– were included in the study. The non – response rate was 9.5%; Six (7.8%) patients and twenty five (10.0%) caregivers declined the interview. Among the selected participants total of 214 caregivers and 39 patients participated in this study (see Table.1).

Table.1. General Category of Study Participants in Relation to Index Cases

Study Participants category	Frequency	Percent (%)
Patients	39	15.4
Spouses	35	13.8
Off springs	85	33.6
Siblings	52	20.6
Parents	3	1.2
Another caregiver	39	15.4
Total	253	100

Among participants 139 (54.94%) were males. The majority (58.49) of respondents were 30-59 years of age (see Table.2). More than two-third (67.58%) of the participants were singles; the frequencies of married and divorced respondents were 66 (26.08%) and 12 (4.47%) respectively. Regarding educational status those who have had primary education or less were 76(30.03%); those who have completed high school or college diploma were 115(45.45%); and those who have at least first college degree were 62 (24.50%). Most (81.81%) of the participants live in urban areas. Rural and suburban residents were 17(6.72%) and 29 (11.46%) respectively. Slightly more than half (51.38%) of the participants have ever been their blood pressure measured. Those who had at least one of hypertension, DM, cigarette smoking or cardiac disease history were 104 (41.11%). 58(22.92%) participants had previous history of hypertension.

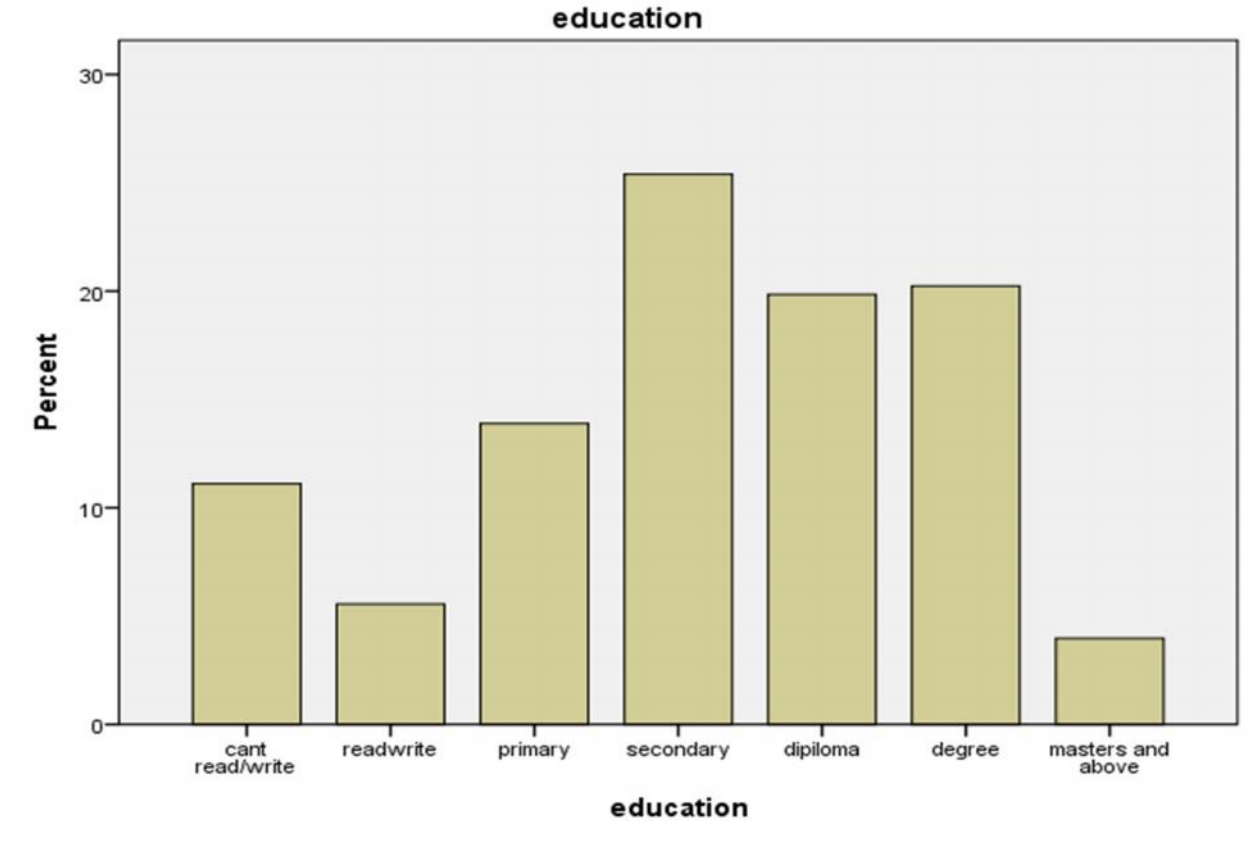
136 (53.75%) participants have ever heard about stroke. The most frequently cited source of knowledge was radio. Other information sources were other stroke patients, friends, health professionals, magazine and newspapers. Information source was not cited by about 15% of individuals (see Table.3). But only 84(33.2%) respondents were able to identify their own/their relatives current illness as stroke. At least one of the different local terms such as *gifit, nerve, shibanet, ya'angol mit, megagna, bird* and exetra were used by 140 (55.33%) participants to identify stroke. The term *gifit*, which literally means high blood pressure, was mentioned by 80 (31.62%) individuals. 28 (11.07%) respondents could not give a medical or local term to denote

their own/their relatives' illness. 91(35.97%) participants identified brain as the primary organ affected by stroke.

Table.2. Socio-demographic & Clinical characteristics

FACTOR	CATEGORY	FREQUENCY	PERCENT (%)
Sex	Male	139	54.94
	Female	114	45.06
Age	<30 YEARS	71	28.00
	30-60 YEARS	148	58.49
	≥60 YEARS	32	12.65
Marital status	Married	66	26.08
	Single	171	67.58
	Divorced	12	4.74
Educational status	Primary and less	76	30.03
	Secondary/college diploma	115	45.45
	College 1st degree/above	62	24.50
Place of residence	Rural	17	6.72
	Rural town/suburban	29	11.46
	Urban	207	81.81
Ever had BP measure	Yes	130	51.38
Prior RISK FACTORS	HYPERTENSION	58	22.92
	DIABETES MELLITUS	24	9.48
	SMOKING	13	5.13
	CARDIAC DISEASE	9	3.55

Graph 1: Level of education of participants



163(64.42%), 19(7.51) and 27(10.67%) of the respondents were able to identify one, two and three or more warning signs/symptoms of stroke respectively. The frequency of individuals who mentioned one, two, and three or more biologically plausible risk factors of stroke were 97(38.33%), 51(20.16%) and 53 (20.95%) respectively. 193(76.28%) participants think that stroke can be prevented by treating or controlling risk factors. Those who believe that stroke patients need urgent treatment were 214(84.6%). 205 (81%) participants believe that stroke patients need subsequent follow ups after initial treatment; 103(40.7%) of them think that stroke victims may suffer another similar attacks in the future. But only 81(32.01%) individuals mentioned that the primary benefit of having follow-up is to prevent the occurrence of another similar attack in the future.

Table.3. Univariate analysis of knowledge variables of the respondents

Variable		Frequency	Percent (%)
THE NAME OF CURRENT ILLNESS	**STROKE**	84	33.20
	ANGOL MIT	11	4.34
	YENERVE BESHITA	34	13.43
	SHIBANET	10	3.95
	GIFIT	80	31.62
	MEGAGNA	5	1.97
	DON'T KNOW	28	11.06
Have prior information about stroke	**YES**	136	53.75
ORGAN PRIMARILY DAMAGED BY STROKE*	**BRAIN**	91	35.96
	LIMBS	61	24.11
	OTHER ORGAN	107	42.29
	DON'T KNOW	53	20.94
SYMPTOMS/WARNING SIGNS OF STROKE*	**One symptoms**	163	64.42
	Two symptoms	19	7.50
	Three /more symptoms	27	10.67
	Don't know	44	17.39
RISK FACTORS FOR STROKE*	**One risk factor**	97	38.33
	Two risk factor	51	20.15
	Three/more risk factors	53	20.94
	Don't know	52	20.55
	Culturally plausible risk	49	19.36
STROKE* CAN BE PREVENTED	**Yes**	193	76.28
STROKE* NEEDS URGENT TREATMENT	**Yes**	214	84.58
STROKE* PATIENT NEEDS FOLLOW UP	**Yes**	205	81.2
BENEFIT OF REGULAR POST-STROKE FOLLOW UP	**To prevent subsequent attacks**	81	39.5
	To reduce disability	77	37.6
	To respect doctors order	47	22.9

*stroke refers the index case illness or patient's current problem (for participants who do not have prior awareness about stroke).

In this study knowledge of risk factors appeared to be a better indicator of knowledge about stroke than knowing symptoms, diagnosis, organ involved or other variables. Those individuals who mentioned one or more standard stroke risk factors have relatively better awareness about stroke that was noticed on the other components of knowledge about stroke, attitude and pattern of practice. Education level and having prior information about stroke showed a strong

Table.4.Univariate analysis of outcome variables (attitude & practice) of the respondents

FACTOR	CATEGORY	FREQUENCY	PERCENT (%)
Do you believe stroke* is associated with evil sprit	Yes	41	16.20
	No	151	59.68
	Neutral/don't know	57	22.53
Do you believe stroke* runs in family	Yes	62	24.50
	No	101	39.92
	Neutral/don't know	82	32.41
Do you think you may suffer a second stroke*	Yes	103	40.71
	No	52	20.55
	Don't know	95	37.54
Worries about stroke*	Disability	65	25.69
	Social Stigmata	30	11.85
	Treatment cost	23	9.09
	Other	135	53.35
Previous 1st aid experience	Yes	50	19.76
First aid actions for uncommunicative stroke victims	Biologically plausible action	65	25.69
	Culturally Plausible action	103	40.71
	Don't know	85	33.59

*stroke refers the index case illness or patient's current problem (for participants who do not have prior awareness about stroke).

association with stroke knowledge. This is congruent with some studies that pointed strong association between higher education level and better knowledge (8, 13, 15).

There is a trend toward positive association between source of information and knowledge of stroke risk factors. Those who got information from other stroke patients and Medias such as radio, magazine and newspaper were more likely to know more risk factors than those who got information from health professionals or friends. But this effect failed to show statistical significance on pattern of practice in first aid action ($p = 0.03$).

Nearly one fourth (24.5%) and one out of six (16.2%) participants believe that stroke runs in family and is associated with evil spirit respectively (see Table.4).

When respondents were asked what they would do as a first aid measures if they encounter an uncommunicative and unconscious person with warning signs/symptoms of stroke (see Table.4): disappointingly a large proportion (103 (40.7%)) of individuals would provide one of the culturally plausible practices such as giving sips of fluid to drink or sprinkling fluid on the patients face and that may increase morbidity and mortality in stroke patients by causing aspiration pneumonia(see Graph.2); 65(25.7%) mentioned one or more biologically plausible immediate measures; and the rest one-third (33.6%) were not sure what they would do. Those

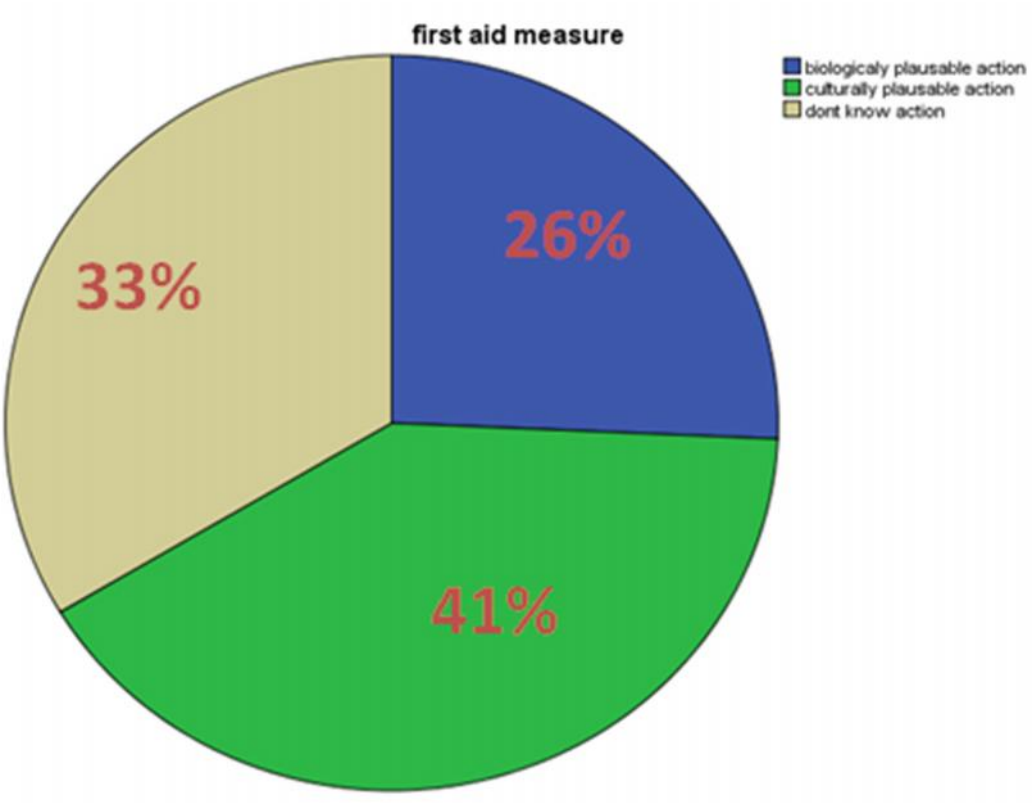
Table. 5 :Multivariate analysis of variables on on Knowledge & Attitude

Variable	**Knowledge (P-value)**	**Attitude (p value)**
Age	0.967	0.682
Sex	0.387	0.432
Educational status	0.045	0.420
Place of residence	0.333	0.394
Prior Information	0.004	0.000
Patient versus attendant	0.681	0.925

who prefer to call ambulance or a health professional for immediate help were 111(43.9%). Individuals who would recommend a stroke patient to be taken for biologically plausible treatment were 130 (90.9%), whereas the rest 23 (9.1%) would recommend culturally plausible treatment. This is a similar finding with Indians study that showed approximately 10.7% of the study participants believe indigenous treatment modalities for stroke (15). Surprisingly those

respondents with pre-existing major stroke risks had no better knowledge, attitude or practice towards stroke.

Ggraph.2. Major categories of variables & proportion of responses as the first aid measure for stroke patients



On multivariate analysis of variables tested to see the effect on practice, higher educational status and knowledge of multiple risk factors independently affected pattern of practice as first aid measures with statistical significance (see Table.6 & 7). Of those who mentioned three or more

risk factors, about 60% would do biologically plausible practice; whereas only about 16% can do so among those who mentioned two or less stroke risk factors (p = 0.001, OR = 7.71, 95% CI (3.97-14.99)).

Table.6. Multivariate analysis of variables on biologically plausible practice (first aid measures)

Variable	AOR	95% CI	P value
Knowing >/= stroke risk factors	7.71	3.97 - 14.99	0.001
Higher educational status	3.66	2.50 - 5.35	0.01

As the educational status increases, the likelihood of taking the right immediate action as first aid measure increases ($p < 0.01$, OR = 3.66, 95% CI (2.50 – 5.35). Having prior information, prior experience of first aid, being stroke patient or attendant, having prior history of major risk factor or remaining on medical follow up did not affect pattern of practice.

Table 7: Multivariate analysis of variables on culturally plausible practice (first aid measures)

Variable	P-value	AOR	95% CI
Educational status	0.001	0.37	0.206-0.665
≥ 3 risks knowledge	< 0.001	0.178	0.082-0.387

Limitations: This is the first study to examine the KAP among new stroke patients and their close relatives in SSA. I acknowledge the limitations of this study. First, the study participants are mixed type (i.e. stroke patients and their close relatives). One major reason why we mixed the relatives of stroke patients in our study is that in Ethiopian context the family live in a joint

system. KAP of individual members in the family influences decision on preventive strategies and interventions for stroke victims. This is a hospital-based study with a small sample size and may not exactly represent the entire population of the country, hence the findings limits generalizability. More than half of new stroke patients and their relatives that visited our study area during the same study period did not participate for many different reasons. As a result our findings cannot be extrapolated to other stroke patients or other relatives of stroke patients.

Conclusion: Level of knowledge about stroke is generally low among participants in this study. Only approximately 11% and 21% of participants mentioned three or more stroke symptoms and risk factors respectively. Having prior information about stroke and higher educational status was independently associated with better knowledge on stroke. There is no significant difference in level of knowledge between caregivers and patients or between respondents with and without previous known major risk factors including hypertension, DM, cardiac disease. Bad attitude of participants regarding spiritual base of stroke is rampant. About 16% individuals believed that stroke is related to spiritual possession; whereas 22.5% were neutral. Findings regarding practice issue were disappointing. Only about one-fourth (25.7%) of the individuals mentioned scientifically plausible immediate measures. A large proportion (41%) of participants would practice first aid measure that are potentially dangerous practices such as giving sips of fluid to drink, feeding by mouth or sprinkling fluid on the patients face and that may increase morbidity and mortality in stroke patients.

2.9 Recommendation:

A broader community based studies are required in the future to confirm our findings. Patient education should be improved on the side of health professionals. There is an urgent need for public education program based on findings in this study.

2.10 Dissemination of the Result

The results of this study have been submitted to the Department of Neurology, Medical Faculty of Addis Ababa University and will be disclosed to the respective authorities. I anticipate manuscript submission to a medical journal for publication.

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Annexes

Annex I: TIME-TABLE FOR THE RESEARCH

Phases	Activities	July – Oct, 2016	Nov – Jan, 2016	March	April	May	June	July	August	September	October	November
1	Research proposal development											
2	Obtaining ethical clearance											
3	Data collection											
4	Data entry and analysis											
5	Report writing											

Annex II: Budget breakdown (Ethiopian Birr)

Personnel Costs						
N^{o}	**Title**	**N^{o}**	**Qualification**	**Rate :birr/day**	**Working days(total)**	**Total price (birr)**
	Enumerator	**2**	Nurse	100	30 days	6000
	Data entry clerk		Physician	200	90 days	18,000

	Supplies and Materials				
	Items	**Unit**	**Quantity**	**Unit price (birr)**	**Total price (birr)**
1	Duplicating paper	Ream	2	90	180
2	Computer paper	Ream	6	150	900
3	Ballpoint pen	Pieces	10	5	50
4	Pencil	Pieces	10	1	30
5	Files	Pieces	6	40	240
6	CD – RW	pieces	1	20	20
6	Flash Disc	Pieces	1	200	200
7	Toner for printing	Pieces	1	1200	1200
8	Staples	Packs	6	60	360
9	Stapler	Pieces	2	140	280
10	Flip board	Pieces	1	30	30
11	Binding	Pieces	10	12	120
12	Contingency budget			5 %	1,080
TOTAL COST (Ethiopian Birr)					**28,990**

Source of Research Fund

The research was sponsored by the department of Neurology.

AnnexIII: Participant information sheet and Informed consent: English version

Department of Neurology, Medical Faculty, Addis Ababa University, Addis Ababa, Ethiopia

STUDY TITLE: KNOWLEDGE, ATTITUDE AND PRACTIC OF NEW STROKE PATIENTS AND THEIR CAREGIVERS TOWARDS STROKE IN TIKUR ANBESA SPECIALISED HOSPITAL & ZEWDITU MEMORIYAL HOSPITAL

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E-mail: diltatagirma@gmail.com

NAME OF THE ADVISORS:

1. **SEID ALI**, MD, Assistant Professor of Neurology Department of Neurology, Medical Faculty, Addis Ababa University,
2. **YARED MAMUSHET**, MD., Assistant Professor of Neurology Department of Neurology, Medical Faculty, Addis Ababa University

GENERAL INFORMATION ABOUT THE STUDY

You are being asked to participate in this research study because data collected will help us to know about the current baseline level of understanding towards stroke by our patients and their caregivers. The result indirectly indicates awareness towards stroke by the general population. The objective of the study is to collect data on stroke awareness by stroke patients and their caregivers as there is no such a study in our country, Ethiopia. In the interview you will be asked about socio-demographic information, some of your health conditions that have relation with stroke, your knowledge, attitude and practice regarding stroke.

COMPENSATION FOR PARTICIPATION

You will not be compensated for participating in this study because it is undertaken for academic purpose. After finishing the study interview you will be provided with a short education about stroke.

RIGHTS OF STUDY PARTICIPANTS

Your participation in the study is completely voluntary and you may choose to stop participating at any time. You will not be penalized if you do not wish to participate in this study. Participation will have no effect on the medical care you will receive. You may ask any questions you have and take time to decide.

RISK FOR THE PARTICIPANTS

We do not anticipate any risks for you participating in this study.

CONFIDENTIALITY OF PERSONAL INFORMATION

We will keep all personal information in the research record private and confidential. The data collected will help to provide improved medical care to our patients.

If you feel comfortable to participate in this study, please sign in the consent form provided in order to begin your participation.

CERTIFICATE OF INORMED CONSENT

I volunteer to participate in a research project which will be conducted by Dr.Girma Diltata, from Addis Ababa University, College of Health Sciences, Neurology Department.

I understand that this project is designed to gather information on the knowledge, attitude and practice of stroke among stroke patients and their caregivers in TASH & ZMH.
I confirm that I have read and I understand the participant information provided for this study. I have had the opportunity to consider the information, to ask questions and I have had them answered to my satisfaction.
I have no objection if the results of the study came out in any of the scientific journals. I understand that the researchers will not identify me by name on any of the reports.
I understand that my participation is voluntary. I am informed that I can withdraw at any time during the study, without any penalty. I have been told that the research has been approved by IRB.
Name of participant……Signature…….

Date……..

Name of data collector ……

Signature ……

Date ……

Annex IV: Study Questionnaire

This data collecting format is structured for the purpose of collecting data for the research to be done on "Knowledge, attitude and practice of stroke among stroke patients and their relatives attending TASH, ZMH & Y12H, Addis Ababa, Ethiopia."

Instruction:
Please circle the appropriate number provided to indicate the responses given by respondents. Write the answers that are not included in the possible answer list.

PART I: Socio-Demographic Variables

1. Name of the Hospital: 1. TASH 2. ZMH 3. Y12H

2. Card no.: _____ Code no.: _____

3. Duration of stay in the hospital

1. < 12 hrs
2. < 36 hrs
3. < 24 hrs
4. < 48 hrs
5. < 72 hrs

4. Age _____

5. Sex:
1. Male
2. Female

6. Place of residency:
1. Urban
2. Sub-urban
3. Rural

7. Marital Status:
1. Never married
2. Married
3. Separated/divorced
4. Widow/er

8. Educational status:
1. Cannot read/write
2. Informal education
3. Primary school (1-8)
4. Secondary school (9-12)
5. College diploma
6. College degree
7. MSC/MA and above

9. Employment
1. Employed
2. Unemployed

10. If employed specify the occupation
1. Professional /technical /managerial
2. Clerical
3. Sales and services
4. skilled manual
5. Unskilled manual
6. Agriculture
7. Other, please specify_____

11. If unemployed:-
1. Housewife
2. Retired
3. Out of job
4. Other, specify_____

12. Average monthly income (Ethiopian Birr)
1. < 1000
2. 1000 – <3000
3. 3000 – <10,000
4. 10,000 – <20,000
5. ≥ 20,000

13. Do you smoke cigarettes?
1. Yes
2. No

14. If so, how much did you smoke?
1. Less than 1 pack year
2. 1-5 pack years
3. 5-9 pack years
4. 10-14 pack years
5. 15-19 pack years
6. >20 pack years

15. Have you ever checked your blood pressure before?
1. Yes
2. No

16. If so, what was the result?
1. Normal BP range
2. Borderline (pre-hypertensive)
3. High BP

17. If your answer is high BP, were you regularly taking medications or having follow up for your high BP?
1. Yes
2. No

18. Do you have Diabetes Mellitus?
1. Yes
2. No

19. Do you have heart disease?
1. Yes
2. No

20. If so, what was the underlying cause of your heart disease?
1. Abnormal heart beat
2. Narrowing of heart blood vessels
3. Abnormality in the heart valve/s
4. Abnormality in the heart muscles
5. High BP
6. Other causes, please specify_____

PART II: Questions Pertaining To The Study Objectives

A. Knowledge on stroke:

1. What do you think is your/your relative's problem/disease or how do you name it?
1. Stroke
2. Brain attack
3. Nerve disease
4. Paralysis
5. Hypertension
6. Attack by evil sprit
7. Curse of God
8. If you know another name, please mention ……

2. Have you ever heard or read about "Stroke" or "brain attack" before?
1. Yes
2. No

3. If so, how did you obtain the knowledge? Through
1. Radio
2. Television
3. News papers
4. Magazines
5. Friends
6. Another stroke victims
7. Doctor
8. Another health professional
9. Another source, please mention_____

4. Which organ/body part do you think is affected by stroke?
1. Brain
2. Heart
3. Blood/blood vessel

4. Limbs
5. Muscle
6. Bone
7. Nerve
8. Kidney
9. Lung
10. Liver
11. Other(s), please specify_____

5. What are the symptoms/warning signs of stroke? (Multiples answers are allowed**)**
1. Sudden onset of severe headache
2. Speech slurred, trouble speaking or understanding
3. Trouble thinking, confusion or coma
4. Loss of vision
5. Uneven face/rotated mouth that worsens on smiling
6. Arm and/or leg weakness or numbness/heaviness, especially on one side
7. Trouble walking, or loss of balance with dizziness
8. Other manifestations, please mention_____ _____

6. Do you think stroke requires emergency treatment?
1. Yes
2. No
3. I'm not sure

7. What do you think causes or is a risk factor for stroke? (Multiples answers are allowed**)**
1. High BP
2. Diabetes mellitus
3. Heart Disease
4. Abnormal blood cholesterol
5. Unhealthy diet/ excess fat in the diet
6. Smoking
7. Obesity
8. Drinking excessive alcohol
9. Physical/ Emotional stress
10. Sedentary life style
11. Sexual intercourse
12. Sudden exposure to cold weather
13. Evil spirit/spiritual possession
14. Genetically transmitted
15. I don't know any risk
16. Other causes or risk factors, mention by _____

8. To your knowledge, which population group(s) is/are most susceptible to stroke?
1. Children
2. Teenagers
3. adults
4. Elderly
5. Men
6. Women
7. I have no idea

9. Do you believe that stroke is preventable disease?
1. Yes
2. No
3. I do not know

10. If so, how can a person prevent developing stroke? One can prevent stroke by
1. treating BP
2. controlling blood sugar level
3. treating heart disease
4. maintaining normal blood cholesterol level
5. taking healthy diet/avoiding fatty meals
6. stopping smoking
7. reducing weight if obese/maintaing normal body weight
8. avoiding excessive alcohol drinking
9. avoiding physical stress/relaxing
10. practicing active life style
11. avoiding sexual intercourse
12. avoiding sudden exposure to cold weather

13. I don't know how to prevent
14. other methods, please mention

_____

11. Do you think that post- stroke patients need to have regular follow up and take some medications lifelong?
1. Yes
2. No
3. I don't know

12. If so, why do you think that post-stroke patients take some medications lifelong and have regular follow up?
1. To prevent another episode of the disease
2. To treat disabilities
3. Because it is the doctor's order
4. Another reason, please mention

_____

B. Attitude towards stroke

1. In your belief, do you think that there is a relationship between stroke and spiritual life/evil spirit?
1. Yes
2. No
3. I have no idea/neutral

2. Do you believe that stroke is genetically transmitted disease?
1. Yes
2. No
3. Neutral/I'm not sure

3. Do you think you could get stroke or another stroke?
1. Yes
2. No
3. Neutral/I don't know

4. What worries you the most when you think about stroke? (Multiples answers are allowed**)**
1. Doctors get difficulty diagnosing and treating the problem
2. Expensiveness of treatment
3. Just because it is a disease
4. Its high risk of recurrence
5. Disability as sequale
6. Stigma because of disability
7. Because it is untreatable disease
8. I don't care/worry about stroke
9. Others, please mention

_____

C. Behaviour/Practice towards stroke:

1. Have you ever performed first aid stroke management before?
1. Yes
2. No

2. How would you perform first aid stroke management, if the subject is unable to communicate? By (Multiple answers are allowed)

1. Putting the subject person on his/her side and his/her head in semi-elevated position
2. removing food or other materials from the subject mouth
3. pouring/sprinkling Holly water on the subject's face
4. giving sips or soft drinks

3. Whom do you prefer to call first for help if available?
1. a nurse/doctor
2. religious leader
3. traditional healer
4. ambulance (907)
5. I don't know whom to call
6. Others, please mention _____

4. What do you recommend for care seeking? I recommend treatment by (Multiples answers are allowed**)**
1. Doctor/health professional
2. Physiotherapy
3. Taking over the counter drugs
4. Religious healing methods
5. Traditional healing/herbal medicines
6. Hot spring bath
7. Oil Massage
8. Dry needle (acupuncture)
9. Staying in holly places till the subject gets cured
10. The subject does not need any treatment
11. I do not know what to advice
12. Other methods, please mention_____

Annex V: Public stroke education messages

1. "**Suddens**" components include:

1. Sudden numbness or weakness of the face, arm or leg, especially on one side of the body
2. Sudden confusion, trouble speaking or understanding
3. Sudden trouble seeing in one or both eyes
4. Sudden trouble walking, dizziness, loss of balance or coordination
5. Sudden, severe headache with no known cause

2. "**FAST**" Message components include:

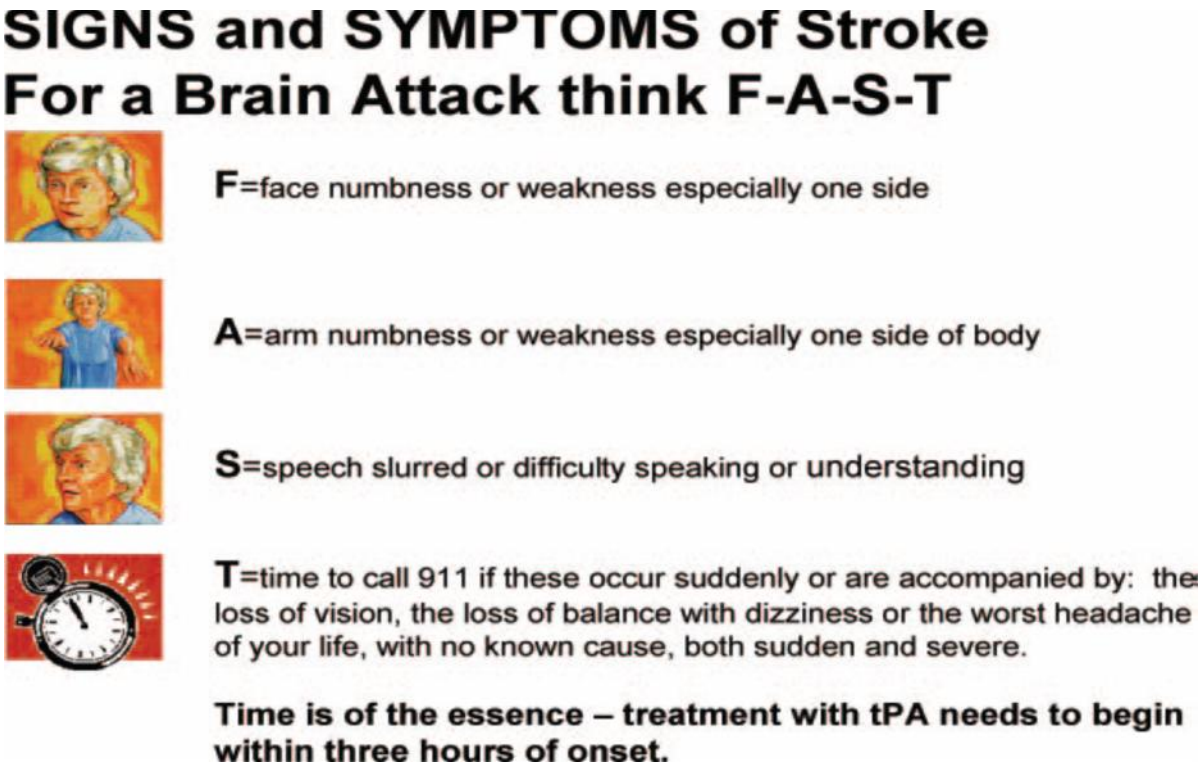

Figure 1. Original "**FAST"** message, including numbness (created by study investigators in 1999, based on the Cincinnati Pre-Hospital Stroke Scale)

3. Modified "**FAST**" message

Figure 2. "FAST" message for stroke warning signs (picture was developed by Massachusetts Department of Health). Note that numbness is excluded, and specific tasks are described.

Annex VI. Participant information sheet and Informed consent:

Amharic Version

ለጥናቱ ተሳታፊዎች የተዘጋጀ የመረጃ ሰነድ

የህክምና ትምህርት ክፍል
አዲስ አበባ ዩኒቨርስቲ
አዲስ አበባ፤ ኢትዮጵያ

የጥናቱ ርዕስ፡- በጥቁር አንበሳ ስፔሻላይዝድ ሆስፒታል ; በዘውዲቱ የመታሰቢያ ሆስፒታል ውስጥ ለመታከም የገቡ የስትሮክ ታማሚዎችና አስታማሚዎቻቸው ስለስትሮክ በሽታ ያላቸውን እውቀት፡ አመለካከትና ድንገት በስትሮክ የታመመ ሰው ቢያጋጥማቸው ሊያከናውኗቸው የሚችሉ ተግባሮችን ማወቅ ነው፡፡

የጥናቱ ዋና ተመራማሪ፡

ዶ/ር ግርማ ዲልታታ ሙዜ

በአ.አ ዩኒቨርስቲ፤ ጤና ሳይንስ ኮሌጅ፤ የነርቭ ህክምና ት/ት ክፍል ፤የነርቭ ህክምና ሰልጣኝ

ስልክ ቁጥር፡- 0913356913/0967234294 E-mail:- diltatagirma@gmail.com

የጥናቱ አማካሪዎች፡-

1. ዶ/ር ሰኢድ አሊ

   በአ.አ ዩኒቨርስቲ የነርቭ ህክምና ት/ት ክፍል ረዳት ፕሮፌሰር
2. ዶ/ር ያሬድ ማሙሸት

   በአ.አ ዩኒቨርስቲ የነርቭ ህክምና ት/ት ክፍል ረዳት ፕሮፌሰር

- ይህ ጥናት በአ.አ ዩኒቨርስቲ የህክምና ት/ት ፋኩሊቲ የነርቭ ት/ት ክፍል እንዲሁም በጥቁር አንበሳ የምርምር ስነ-ምግባር ቦርድ የጸደቀ ነው፡፡

ስለጥናቱ ዓላማና አጠቃላይ መረጃ

እርስዎ በዚህ ጥናት ተሳታፊ እንዲሆኑ በአክብሮት ተመርጠዋል፡፡ ይህ ጥናት የሚካሄደው በጥቁር አንበሳ ስፔሻላይዝድ ሆስፒታልና በዘውዲቱ የመታሰቢያ ሆስፒታል ለመታከም የተኙ የስትሮክ ታማሚዎችና ቤተሰቦቻቸው ስለ ስትሮክ በሽታ ያላቸውን እውቀት፣ አመለካከትና እንድሁም ድንገት የስትሮክ ታማሚ ቢያጋጥማቸው ምን እንደሚያደርጉ ለማወቅ ለሚደረግ ምርምር

መረጃ ለመሰብሰብ ነው፡፡ እስካሁን ስለ ስትሮክ የግንዛቤ ጥናትና ምርምር በአገራችን ውስጥ አልተደረገም፡፡ ስለዚህ የዚህ ጥናት ዓላማ ይህን በተመለከተ ምርምር ማድረግ ነው፡፡ በመሆኑም ከዚህ ጥናት የምንሰበስበው መረጃ በተዘዋወሪ የማህበረሰባችንን ስለ ስትሮክ ያለውን አጠቃላይ ግንዛቤ ይጠቁማል፡፡

በጥናቱ መጠይቅ ላይ ስለዲሞግራፊያዊ (የማንነት)፣ ማህራዊና ከስትሮክ ተያያዥነት ያላቸው የጤንነት መረጃዎች፣ ስለ ስትሮክ ያሎት እውቀት፣ አመለካከትና እንዲሁም አንድ በስትሮክ የታመመ ሰው ቢያጋጥሞት ምን አይነት የመጀመሪያ ደረጃ እርዳታ እንደሚያርጉለትና ለቀጣይ ህክምና ምን እንደሚመክሩት ይጠየቃሉ፡፡

በጥናቱ ላይ በመሳተፍ የሚያገኙት ጥቅም

ጥናቱ ትምህርታዊ ብቻ ሲሆን በጥናቱ ላይ በመሳተፍዎ የሚያገኙት ጠገንዘብ ማካካሻ ወይም ክፍያ አይኖርም፡፡ የጥናቱን ቃለ-መጠይቅ መልሰው እንደጨረሱ መረጃ ሰብሳቢው ስለ ስትሮክ አጠር ያለ ጠቃሚ ትምህርት ይሰጥዎታል፡፡

የጥናቱ ተሳታፊ መብቶች

በዚህ ጥናት ላይ የሚያደርጉት ተሳታፊነት ሙሉ በሙሉ በፈቃደኝነትዎ ላይ የተመሰረተ ነው፡፡ እንዲሁም ጥናቱን በማንኛውም ጊዜ በፈቃድዎ ማቋረጥ ይችላሉ፡፡ጥናቱ ላይ ባለመሳተፍዎ ወይም ጥናቱን በማቋረጥዎ በእርሶ ላይ የሚደርስ ምንም አይነት ተፅእኖ አይኖርም፡፡ በጥናቱ ከመሳተፍዎ በፊት ማንኛውም አይነት ጥያቄ መጠየቅም ሆነ ጊዜ ወስደው ማሰብ ይችላሉ፡፡

በጥናቱ ላይ በመሳተፍዎ ሊደርስ የሚችል ጉዳት

በዚህ ጥናት ላይ በመሳተፍዎ ምንም አይነት ጉዳት አይደርስበትም፡፡

በጥናቱ ላይ የምናገኛቸውን መረጃዎች በሚስጥር ስለመጠበቅ

በዚህ ጥናት የሚናገኛቸው መረጃዎች በሙሉ በሚስጥር ይጠበቃሉ፡፡ የጥናቱ ውጤት በተለያ የህክምና አምዶች የሚወጣ ከሆነ የስትሮክ ታማሚዎች እና ለስትሮክ ተጋላጭ የሆኑ ሰዎች የበለጠ ደረጃውን የጠበቀ እንክብካቤ እንዲደረግላቸው ይረዳል፡፡ ነገር ግን የእርስዎ ስም በአምዶቹ ላይ አይገለጽም፡፡

በጥናቱ ላይ ለመሳተፍ ፈቃደኛ ከሆኑ የፈቃደኝነት መግለጫው ላይ እንደፈረሙ በአክብሮት እንጠይቃለን፡፡

<u>የስምምነት ቃል/ የተሳታፊዎች የፈቃደኝነት መግለጫ ቅፅ</u>

እኔ_____ በገፅ_____ ላይ ስለጥናቱ ባነበብኩት/በተነበበልኝ መረጃና ከተመራማሪዎች በተረዳሁት መሰረት በጥናቱ ላይ በሙሉ ፈቃደኝነት ለመሳተፍ የተስማማሁ መሆኔን በፊርማዬ አረጋግጣለሁ፡፡ በጥናቱ ላይ በመሳተፌ ሚደርስብኝ ምንም አይነት ጉዳት እንደሌለ ተረድቻለው፡፡

ከጥናቱ የተገኙ ውጤቶች በማንኛውም የህክምና ዓምዶች ላይ ቢወጡ ቅራኔ የሌለኝ መሆኔን እንዲሁም በስም እንደማልገልጽ እንደተነገረኝ አረጋግጣለሁ፡፡ከጥናቱ ጋር በተያያዘ ምንም አይነት ቅሬታ ቢኖረኝ ለዚሁ ዓላማ የተቋቋመ ኮሚቴ እንዳለና አቤቱታዬን ማቅረብ እንደምችል ተነግሮኛል፡፡ የዚህ ስምምነት ቃል ግልባጭም ተሰጥቶኛል፡፡

የጥናቱ ተሳታፊ ስም_____

ፊርማ_____ ቀን_____

ጥናቱን የሚያካሄደው ሀኪም ስም_____

ፊርማ_____

<u>የመረጃ መሰብሰቢያ የመጠይቅ ቅፅ</u>

ይህ የመረጃ መሰብሰቢያ ቅፅ የተዘጋጀበት ዓላማ በጥቁር አንበሳ ስፔሻላይዝድ ሆስፒታልና በዘውዲቱ የመታሰቢያ ሆስፒታል ውስጥ የሚታከሙ የስትሮክ ታማሚዎችና ቤተሰቦቻቸው ወይም የቅርብ ዘመዶቻቸው ስለስትሮክ በሽታ ያላቸውን እውቀት፣ አመለካከትና ተግባር ለማወቅ ለሚደረግ ምርምር መረጃ መሰብሰቢያ መጠይቅ ነው፡፡

መመሪያ፡- እባክዎ ለተሰጡት ጥያቄዎች ትክክለኛውን መልስ ይስጡ

<u>ክፍል አንድ፡- ዲሞክራሲያዊ ፤ማህበራዊ እና የጤንነት መረጃ</u>

1. የሆስፒታሉ ስም

1. ጥቁር አንበሰ ሆስፒታል
2. የዘውዲቱ መታሰቢያ ሆስፒታል

2. የመለያ ቁጥር _____

የካርድ ቁጥር _____

3. እዚህ ሆስፒታል ውስጥ ምን ያህል ሰዓት ጊዜ ቆዩ?

1. **< 12** 2. **<24**
2. **<36** 4. **<48** 5. **<72**

4. እድሜ _____

5. ጾታ

1. ሴት
2. ወንድ

6. የሚኖሩበት ቦታ?

1. ከተማ
2. የገጠር ከተማ
3. ገጠር

7. የጋብቻ ሁኔታ

1. ያላጋባ
2. ያገባ
3. የፈታ/የተለያየ
4. ባል /ሚስት የሞተበት

9. የትምህርት ደረጃ

1. መፃፍ እና ማንበብ የማይችል
2. መደበኛ ት/ት ያ ልተማረ (መጻፍ እና ማንበብ የሚችል)
3. አንደኛ ደረጃ የተማረ
4. ሁለተኛ ደረጃ የተማረ
5. ዲፕሎማ
6. ዲግሪ
7. ማስተርስና ከዛ በላይ

10. የሥራ ሁኔታ

1. ሥራ ያለው
2. ሥራ የሌለው

11. ሥራ ያለው ከሆነ የሥራው ዓይነት

1. የሙያ ሥራ
2. አማካሪ
3. የእጅ ስራ
4. የሽያጭ ጥገና
5. የልምድ ስራ
6. ግብርና
7. ሌላ ከሆነ _____

12. ሥራ የሌለው ከሆነ

1. የቤት እመቤት
2. ጡረተኛ
3. ሥራ የለቀቀ
4. ሌሎች _____

13. አማካይ ወርሃዊ ገቢ (በኢትዮጵያ ብር)

1. ከ1000 በታች
2. 1000 - < 3000
3. 3000 - < 10,000
4. 10,000-20,000
5. ›20,000

14. ሲጋራ ያጨሳሉ?

1. አዎ
2. የለም

15. መልሱ አዎ ከሆነ, እስከዛሬ በአማካይ ምን ያህል አጭሰዋል (በቀን 1ፓኮ ቢሆን ስንት ዓመት አጨሱ ማለት ነው?)

1. ከ1 ዓመት በታች
2. 1-4 ዓመት
3. 5-9 ዓመት
4. 10-14 ዓመት
5. 15-20 ዓመት
6. ከ20ዓመት

16. የደሞ ግፊትዎን መጠን ተለክተው ያውቃሉ?

1. አዎ 2. የለም

17. የደሞ ግፊትዎን መጠን ተለክተው የሚያውቁ ከሆነ መጠኑ እንዴት ነበር?
    1. ትክክለኛ መጠን ነበር
    2. የደም ግፊት ሊጀምረኝ እንደሆነ ተነግሮኝ ነበር
    3. ደም ግፊት ነበረኝ
18. የደም ግፊት ከነበሮት ቋሚ ክትትልና መድሀኒት መውሰድ ጀምረዋል?
    1. አዎ
    2. የለም
19. የስኳር በሽታ አሎት?
    1. አዎ
    2. የለም
20. የልብ ድካም በሽታ ታማሚ ኖት?
    1. አዎ
    2. የለም
21. መልሱ አዎ ከሆነ ለልብ ድካምዎ መንስኤው ምንድነው?
    1. የልብ ምት መዛባት
    2. ልብ ደም ስሮች ጥበት
    3. ልብ በር ቫልቭ እንከን
    4. የልብ ጡንቻዎች እንከን
    5. ከፍተኛ የደም ግፊት

ክፍል ሁለት ፡- <u>የጥናቱን ዋና ዓለማ የተመለከቱ ጥያቄዎች፤</u>

ሀ. <u>ስለ ስትሮክ ያሎትን ዕውቀት በተመለከተ፤</u>

1. አሁን እርስዎ /የእርሶ ዘመድ የታመሙበት በሽታ ስም ምን ተብሎ ይጠራል?
    1. ስትሮክ
    2. የአንጎል ምት
    3. ነርቭ/የነርቭ በሽታ
    4. ሽባነት
    5. የደም ግፊት
    6. መጋኛ
    7. እርግማን
    8. እባክዎ ሌላ ስም ካለው ይጥቀሱ
       ……..
2. ስትሮክ ወይም የአንጎል ምት ስለሚባል በሽታ ሰምተው ወይም አንብበው ያውቃሉ?
    1. አዎ
    2. የለም
3. መልስዎ አዎ ከሆነ መረጃውን ከየት አገኙ?
    1. ከሬዲዮ
    2. ከቴሌቭዥን
    3. ከጋዜጣ
    4. ከመፅሔት
    5. ከጓደኛዬ
    6. ከሌላከስትሮክ ታማሚ
    7. ከሃኪም
    8. ከሌላ የጤና ባለሙያ
    9. ከሌላ ምንጭ ከሆነ እባክዎ ይጥቀሱ
       ……
4. በስትሮክ የሚጠቃው የትኛውን የሰውነት ክፍል ይመስሎታል
    1. አንጎል
    2. ልብ
    3. የደም ስር
    4. እጅና እግር
    5. ጡንቻ
    6. አጥንት
    7. ነርቭ
    8. ኩላሊት
    9. ሳንባ
    10. ጉበት
    11. ሌላ አካል፤ እባክዎ ይጥቀሱ ……

5. አንድ ሰው በስትሮክ መጠቃቱን የሚያሳዩ/የሚያስጠነቅቁ የህመም ምልክቶች ምን ምንድናቸው?
   1. ድንገት የሚጀምር ከፍተኛ የሆነ ራስ ምታት
   2. የንግግር መኮላተፍ፤ ለመናገር ወይም ለመረዳት መቸገር
   3. ለማሰብና ለማገናዘብ መቸገር፤ መወዛገብ ወይም ራስን መሳት
   4. ማየት አለመቻል
   5. የፊት ቅርፅ/የአፍ መጣመም፤ በፈገግታ ወቅት
   6. የእጅ ወይም የእግር መስነፍ/መዛል መደንዘዝ ወይም መክበድ በተለይ በአንድ በኩል ከፍሎ
   7. ለመራመድ መቸገር መንገዳገድ እና የማዞር ስሜት መፈጠር
   8. ሌላ ምልክት ካለ ይጥቀሱ ……..
6. ስትሮክ አፋጣኝ ህክምና የሚያስፈልገው ይመስሎታል?
   1. አዎ
   2. የለም
   3. አላውቅም
   4. 1 ሳምንት
   5. 1 ወር
   6. አላውቅም
7. ለስትሮክ መንስኤው ወይም ተጋላጭ የሚያደርገው ምን ይመስሎታል? (ከ1 በላይ መልስ መስጠት ይቻላል)
   1. የደም ግፊት መጨመር
   2. የስኳር በሽታ
   3. የልብ በሽታ
   4. የተዛባ የደም ኮሌስትሮል/ስብ
   5. ጤናማ ያልሆነ አመጋገብ
   6. ሲጋራ ማጨስ
   7. ጤናማ ያልሆነ ውፍረት
   8. ከመጠን በላይ አልኮል መጠጣት
   9. የስሜት መረበሽ /አካላዊ ጫና
   10. አካላዊ እንቅስቃሴ አለማድረግ
   11. የግብረ ስጋ ግኝኙነት
   12. ለድንገተኛ ቅዝቃዜ/ብርድ መጋለጥ
   13. መጋኛ
   14. አላውቅም
   15. ሌላ ዘዴ ካለ ይጥቀሱ ……..
8. በርሶ እውቀት/ግምት የትኛው የሕብረተሰብ ክፍል በስትሮክ ለመጠቃት ተጋላጭ ይመስሎታል?
   1. ህፃናት
   2. ጎረምሳዎች
   3. ጎልማሶች
   4. አረጋውያን
   5. ሴቶች
   6. ወንዶች
   7. አላውቅም
9. ስትሮክን መከላከል የሚቻል ይመስሎታል?
   1. አዎ
   2. የለም
10. መልስዎ አዎ ከሆነ፡ አንድ ሰው በስትሮክ እንዳይጠቃ እንዴት መከላከል የሚችል ይመስሎታለ?
    1. የደም ግፊት ካለው በመታከም
    2. የሰኳር ታማሚ ከሆነ የደም ስኳሩን መጠን በመቆጣጠር
    3. የልብ ህመምተኛ ከሆነ በመታከም
    4. ጤናማ የደም ኮሌስትሮል መጠን እንዲኖረው በማድረግ
    5. አካላዊ ጫናን በመከላከል/በመዝናናት
    6. ስጋራ ማጨስ በማቆም
    7. ጤናማ የሆነ ክብደት እንዲኖረው በማድረግ
    8. ከመጠን በላይ አልኮል ባለመጠጣት
    9. ጤናማ የሆነ አመጋገብ በመከተል
    10. አካላዊ እንክስካ ማብዛት
    11. የግረስጋ ግንኙነት አለማድረግ
    12. ብርድ እንዳይመታው በመከላከል
    13. እንዴት መከላከል እንደሚጫል አላውቅም
    14. ሌላ ዘዴ ከለ ይጥቀሱ
        ……
11. አንድ ሰው አንደ ጊዜ በስትሮክ ከታመመ ቋሚ ክትትልና ያለማቋረጥ የሚወስደው መድሃኒት የሚያስፈልገው ይመስሎታል?
    1. አዎ

2. የለም

12. መልስ አዎ ከሆነ ለምን?

1. ለ2ኛ ጊዜ ድጋሚ እንዳያመው ለመከላከል
2. የደረሰበትን አካል ጉዳተኝነት ለማከም
3. የሐኪም ትዕዛዝ ስለሆነ
4. ሌላ ምክንያት ካሎት ይጥቀሱ

……

ለ. ስለ ስትሮክ ያሎትን አመለካከት በተመለከተ፤

1. በርስዎ እምነት በስትሮክ ህመምና በመንፈሳዊ ህይወት /በሰይጣን/ በእርኩስ መንፈስ መካከል ተዛማጅነት ያለ ይመስሎታል ?
   1. አዎ
   2. የለም
   3. አላውቅም
2. ስትሮክ በዘር የሚተላለፍ በሽታ ይመስሎታል ?
   1. አዎ
   2. የለም
   3. አላውቅም
3. ስትሮክ ታማሚ ከሆኑ ሌላ ስትሮክ ከእንደገና ሊያመኝ ይችላል ብለው ያምናሉ?

   1. አዎ 2. የለም 3. አላውቅም

4. ስለ እስትሮክ ስያስቡ በጣም የሚያሳስበት ነገር ምንድነው? (ከ1 በላይ መልስ መስጠት ይችላል)
   1. ሀኪሞች በሽታውን ለማወቅም ሆነ ለማከም ስለሚቸገሩ
   2. በሽታውን ለመታከም ህክምናው ውድ መሆኑ
   3. በሽታ መሆኑ
   4. አንድ ጊዜ ከተከሰተ ተመልሶ የመምጣቱ ሁኔታ
   5. በሽታውን ተከትሎ የሚኖረው አካል ጉደተኝነት
   6. በአካል ጉዳተኝነት የተነሳ የሚመጣው መገለል
   7. የማይታከም በሽታ መሆኑ
   8. እኔ በበኩሌ ምንም ስትሮክ አያሳስበኝም
   9. ሌላ ምክንያት ካለ ይጥቀሱ

   ……

ሐ. ተግባርን የተመለከቱ ጥያቄዎች ፤

1. ለስትሮክ ታማሚ የመጀመሪያ ደረጃ እርዳታ አድርገው ያውቃሉ?
   1. አዎ
   2. የለም

2. አንድ ሰው ድንገት የስትሮክ ምልክት ቢታይበት እና ማውራት ቢያቅተው ራሱነ ቢስት ምን ያደርጉለታል?
   1. በጎኑ አስተኝቼ አንገቱን በከፊል ቀና አደርገዋለው
   2. ምግብና ሌላ ቆሻሻ አፉ ውስጥ ካለ አስወጣለታለው
   3. ፊቱ ላይ የጠበል ውሃ እረጫለው
   4. ውሃ ወይም ለስላሳ መጠጦች አጠጠዋለው

3. ለዚሁ ሰው አፋጣኝ እርዳታ ቢያስፈልጎት ማን ጋር መደወል ይመርጣሉ?
    1. ነርስ/ሀኪም
    2. የሀይማኖት አባት
    3. የባህል መድሃኒት ቀማሚ
    4. አምቡላንስ (907)
    5. ማንን መጥራት እንዳለብኝ አላውቅም
    6. ሌላ የሚጠሩት አካል /ወገን ካለ ይጥቀሱ …….
4. የስትሮክ ታማሚዎች ህክምና በማንና በምን አማካኝነት እንዲሰጣቸው ይመክራሉ?
    1. በሀኪም/የጤና ባለሙያ
    2. በጤና ባለሙያ መታሸት (ፊዚዮቴራፒ)
    3. እራሳቸው ከመድሃኒት መደብር መድሃኒት ገዝተው እንዲጠቀሙ
    4. በሀይማኖታዊ መንገድ
    5. በባህላዊ የህክምና ዘዴ/የባህል መድሃኒት
    6. በፍል ውሃ በመታጠብ
    7. በቅባት በመታሸት
    8. በደረቅ መርፌ
    9. ምንም አይነት ህክምና አያስፈልገውም
    10. ምን እንደምሞክር አላውቅም
    11. ሌላ ካለ ይጥቀሱ ……..