

Official Study Title:

Effectiveness of a BEFAST-Based Stroke Education Module on Knowledge, Attitudes and Practices Among Stroke Patients at a Malaysian Tertiary Hospital: A Pre-Post Intervention Study

NCT Number:

[NCT Number Pending – to be inserted after [ClinicalTrials.gov](https://clinicaltrials.gov) registration]

Document Date:

25 May 2026

Document Type:

- ☐ Study Protocol
- ☐ Ethics approval
- ☐ Informed Consent Form (ICF)

Version Number (if applicable):

Version 1.0 – Final

Responsible Party / Corresponding Author:

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Ethics Approval Reference:

JKEUPM-2024-257 (Ethics Committee Involving Human Subjects, Universiti Putra
Malaysia)



PEJABAT TIMBALAN NAIB CANSELOR (PENYELIDIKAN DAN INOVASI)
OFFICE OF THE DEPUTY VICE CHANCELLOR (RESEARCH AND INNOVATION)

Rujukan kami : UPM.TNCPI.800-2/1/7

Tarikh : 15th August 2024

Assoc. Prof. Dr. Abdul Hanif Khan Yusof Khan
Department Of Neurology
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
Serdang, Selangor

Dear Sir,

**RESEARCH PROJECT : THE EFFECTIVENESS OF STROKE EDUCATION MODULE
IN PROMOTING KNOWLEDGE OF STROKE AMONG
PATIENTS ADMITTED AT PUBLIC TERTIARY HOSPITAL**
REFERENCE NO : JKEUPM-2024-257
PRINCIPAL : ASSOC. PROF. DR. ABDUL HANIF KHAN YUSOF KHAN
INVESTIGATOR
CO-INVESTIGATOR : DR. NOOR HUDA BINTI AB HAMID (STUDENT)

The Ethics Committee for Research involving Human Subjects of University Putra Malaysia (JKEUPM) has studied the proposal for the above project and found that there were no objectionable ethical issues involved in the proposed study.

Please find the list of documents received and reviewed with reference to the study and committee members who reviewed the documents (as attached).

Notwithstanding the above, we will not be responsible for any misconduct on the part of researchers in the course of carrying out the research.

Ethical approval is required in the case of amendments/ changes to the study documents/ study sites/ study team.

Thank you.

"WITH KNOWLEDGE WE SERVE"

Sincerely yours,

PROF. DR. JOHNSON STANSLAS

Chair

Ethics Committee for Research involving Human Subjects
Universiti Putra Malaysia

**ETHICS COMMITTEE FOR RESEARCH INVOLVING HUMAN SUBJECTS (JKEUPM)
UNIVERSITI PUTRA MALAYSIA**

Research title	: The Effectiveness of Stroke Education Module in Promoting Knowledge of Stroke Among Patients Admitted at Public Tertiary Hospital
Study Site	: Hospital Sultan Abdul Aziz Shah, Universiti Putra Malaysia.
JKEUPM Ref No.	: JKEUPM-2024-257
Principal Investigator	: Assoc. Prof. Dr. Abdul Hanif Khan Yusof Khan
Co-investigator	: Dr. Noor Huda binti Ab Hamid (Student)

Documents received and reviewed with reference to the above study:

1. Ethics Application Form, Version 1 dated 1/4/2024.
2. Respondent's Information Sheet / Consent (English), Version 2 dated 9/5/2024.
3. Respondent's Information Sheet / Consent (Malay), Version 2 dated 9/5/2024.
4. Proposal (English), Version 1 dated 11/6/2024.
5. Questionnaire / Interviews (English), Version 1 dated 11/6/2024.
6. Curriculum Vitae of:
 - i. Assoc. Prof. Dr. Abdul Hanif Khan Yusof Khan
 - ii. Dr. Noor Huda binti Ab Hamid

The University Research Ethics Committee, Universiti Putra Malaysia (JKEUPM) operates in accordance with the ICH-GCP Guidelines.

Decision by JKEUPM:

☒

Approved

☒

Permission MUST BE OBTAINED from the respective hospitals / institutions before conducting the research

☐

Disapproved

Please note that the approval is **VALID UNTIL 14th AUGUST 2025**

Researchers should comply with the following:

- I. Complete a Study Final Report upon study completion (Form 3.2).
- II. Ethical approval is required in the case of amendments/ changes to the study documents/ study sites/ study team.
- III. Applicable for Clinical Trial Studies and Clinical interventional Studies only: Progress Report must be submitted to JKEUPM at every 6 months from the date of approval (Form 3.1). Report occurrences of all Serious Adverse Events (SAEs), Suspected

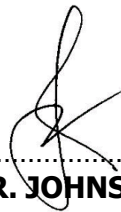
Unexpected Serious Adverse Reaction (SUSARs) and Protocol Deviation/ Violation at all JKEUPM approved sites to JKEUPM. All serious adverse events (SAEs) detected or being notified should be reported immediately to the sponsor except for those SAEs that the protocol or other document (e.g., Investigator's Brochure) identifies as not needing immediate reporting. The immediate reports should be followed promptly by detailed, written reports.

The required forms can be obtained from the Ethics Committee for Research Involving Human Subjects (JKEUPM) website (<http://www.tncpi.upm.edu.my/faiildokumen>).

Date of Approval: 15th August 2024

Members of the JKEUPM who reviewed the documents:

- i. Primary Reviewer: Dr. Umami Nadira Daut
- ii. Informed Consent Form: Assoc. Prof. Dr. Tham Jern Sen



PROF. DR. JOHNSON STANSLAS

Chair

Ethics Committee for Research involving
Human Subjects
Universiti Putra Malaysia

JKEUPM is recognized by The Strategic Initiative for Developing Capacity in Ethical Review (SIDCER) in collaboration with the Forum for Ethical Review Committees in Asia and the Western Pacific Region (FERCAP) for its compliance with the Declaration of Helsinki, International Conference on Harmonization (ICH) Guidelines, Good Clinical Practice (GCP) Standards, Council for International Organizations of Medical Sciences (CIOMS) Guidelines, World Health Organization (WHO) Standards and Operational Guidance for Ethics Review of Health-Related Research and Surveying and Evaluating Ethical Review Practices, EC/IRB Standard Operating Procedures (SOPs), and Local Regulations and Standards in Ethical Review.



**THE EFFECTIVENESS OF STROKE EDUCATION MODULE IN PROMOTING
KNOWLEDGE OF STROKE AMONG PATIENTS ADMITTED AT PUBLIC
TERTIARY HOSPITAL**

STUDENT: DR NOOR HUDA BINTI AB HAMID (GS59885)

COURSE: MASTERS OF MEDICINE (INTERNAL MEDICINE)

FACULTY: FACULTY OF MEDICINE AND HEALTH SCIENCES

SUPERVISOR:

ASSOCIATE PROF DR ABDUL HANIF KHAN BIN YUSOF KHAN

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Study Protocol**Title:**

THE EFFECTIVENESS OF STROKE EDUCATION MODULE IN PROMOTING KNOWLEDGE OF STROKE AMONG PATIENTS ADMITTED AT PUBLIC TERTIARY HOSPITAL

Protocol number, version number and date:

Version 1.0,9/1/24

Name and Institution of Principal investigator:

1. Assoc Professor Dr Abdul Hanif Khan Yusof Khan, Neurologist, & Clinical Lecturer, Department of Neurology, Faculty of Medicine and Health Sciences, UPM
2. Dr Noor Huda binti Ab Hamid ,Postgraduate student of Master of Internal medicine UPM

Name and Institution of Co-Investigators:**Name and address of Sponsor:**

This study will be self-sponsored study

Study site/s:

This study will be done at Hospital Sultan Aziz Shah (UPM)

Research Synopsis

Study title	THE EFFECTIVENESS OF STROKE EDUCATION MODULE IN PROMOTING KNOWLEDGE OF STROKE AMONG PATIENTS ADMITTED AT PUBLIC TERTIARY HOSPITAL.
Study Population	The study population comprises stroke patients admitted to Hospital Sultan Abdul Aziz Shah (HSAAS).
Study Design	This is prospective questionnaire-based study
General Objective	To investigate the impact of stroke education module among stroke patients admitted as inpatients at Hospital Sultan Abdul Aziz Shah, UPM.
Specific Objectives	<ol style="list-style-type: none">1. To determine the baseline demographic factor among stroke patients admitted as inpatients.2. To determine the baseline Knowledge, Attitude, and Practices (KAP) level among stroke patients admitted as inpatients.3. To assess the effectiveness of stroke education module on improving the levels of Knowledge, Attitude, and Practices (KAP).4. To determine the association demographic factors with the level of Knowledge, Attitude, and Practices (KAP) among stroke patients admitted as inpatients
Study endpoints/outcomes	<ol style="list-style-type: none">1.Stroke education modules play a vital role in promoting knowledge among patients admitted to public tertiary hospitals.2.These interventions have demonstrated effectiveness in improving patients' understanding of stroke risk factors, symptoms, and management options.
Sample Size	201 participants
Study Duration	The study will be conducted over a period of 6 month, starting from June 1st, 2024, until November 2024, focusing on stroke patients who meet the predetermined inclusion criteria for participation in the research.

Executive Summary

This proposal outlines a prospective questionnaire-based study to investigate the effectiveness of a stroke education module in promoting knowledge of stroke among patients admitted to Hospital Sultan Abdul Aziz Shah (HSAAS), a public tertiary hospital in Malaysia.

The burden of stroke is significant in Malaysia, being the second leading cause of death among females and third among males. Despite advancements in acute stroke management, the global burden cannot be reduced without extensive public health efforts to raise awareness, particularly among high-risk groups. The study aims to determine the baseline demographic factors, knowledge, attitudes, and practices (KAP) related to stroke among admitted patients. It will then assess the effectiveness of a stroke education module in improving KAP levels and explore the association between demographic factors and KAP levels.

The stroke education module will be adapted from the ANGELS Initiative and will cover stroke definition, symptoms (using the BEFAST mnemonic), risk factors, appropriate actions, and preventive measures. The module will employ a multi-modal approach, including direct health education lectures, daily reminders during ward rounds, pamphlets, posters, and online resources. The study will involve 201 stroke patients admitted to HSAAS who meet specific inclusion criteria, such as age over 18, MMSE score above 21, stroke diagnosis via imaging, and ability to understand Malay or English. Data will be collected using a validated questionnaire, and statistical analysis will be performed using SPSS.

The expected outcomes are that stroke education modules play a vital role in promoting knowledge among admitted patients and have demonstrated effectiveness in improving understanding of stroke risk factors, symptoms, and management options. However, challenges such as accessibility and cultural factors highlight the need for tailored and culturally sensitive educational strategies.

Introduction

Stroke represents a critical global health challenge, ranking as the second leading cause of death worldwide and a major contributor to long-term disability (World Health Organization, 2018). In Malaysia, the burden of stroke is particularly concerning, with it being the third leading cause of death among males and the second among females (Loo & Gan, 2012). Despite advances in acute stroke management, the overall stroke burden cannot be effectively mitigated without comprehensive public health efforts aimed at raising awareness and promoting preventive measures, especially among high-risk populations.

Recent data from the National Health and Morbidity Surveys in Malaysia reveals several alarming trends. There has been a substantial increase in the incidence of stroke among individuals under 65 years of age, with the largest rise observed in the 35-39 age group for both men (53.3% increase) and women (50.4% increase) (Tan & Venketasubramanian, 2022). Furthermore, the prevalence of major vascular risk factors, such as diabetes mellitus, hyperlipidemia, and obesity, has been steadily increasing within the Malaysian community. These findings underscore the urgent need for targeted interventions to address the growing burden of stroke and its associated risk factors.

Stroke prevention and management necessitate a multifaceted approach that extends beyond acute medical interventions to encompass robust educational strategies. These strategies aim to enhance awareness, knowledge, and preventive behaviors among at-risk populations (Mozaffarian et al., 2015). Numerous studies have explored the efficacy of stroke education campaigns in various settings and populations, highlighting their potential to improve patient outcomes and reduce the overall stroke burden (Rasura et al., 2014).

In light of these concerns, this study proposes to investigate the effectiveness of a stroke education module in promoting knowledge among patients admitted to a public tertiary hospital in Malaysia. By enhancing patient understanding of stroke risk factors, symptoms, and management options, this educational intervention has the potential to empower individuals and facilitate positive behavioral changes, ultimately contributing to stroke prevention and improved patient outcomes.

Literature review

Stroke is a leading cause of mortality and morbidity worldwide, imposing a considerable burden on healthcare systems and individuals. Despite advancements in stroke management, prevention through education remains paramount in reducing its incidence and improving outcomes. Public tertiary hospitals serve as vital centers for stroke care, offering opportunities for educational interventions among admitted patients. Stroke education modules are designed to enhance patients' understanding of stroke risk factors, symptoms, and preventive measures.

Lack of knowledge and healthcare-seeking practice among developing nations proved to hinder in combating stroke. Therefore, this study aims to determine the baseline knowledge on stroke recognition, actions to be taken during stroke, and a healthcare-seeking attitude among patient that admitted with stroke in ward.

A study conducted by Rasura et al. provides a comprehensive review of literature spanning from 1999 to 2012 regarding the effectiveness of stroke educational campaigns. Through a narrative synthesis, the study concludes that such campaigns possess the capacity to enhance knowledge and awareness regarding strokes and can influence behavioral changes among a significant portion of the population. The findings emphasize the importance of health promoters and researchers adopting a flexible and participatory approach in developing interventions aimed at stroke prevention and education. This adaptability is crucial for ensuring the cost-effectiveness of these interventions while also catering to the diverse needs and contexts of the target audience. Furthermore, the study suggests that a comprehensive stroke promotion strategy should incorporate both community-based campaigns and electronic tools (e-tools) to maximize their impact and reach. By integrating various approaches and platforms, such as social media, mobile applications, and online resources, stakeholders can effectively engage with different segments of the population and promote awareness and prevention strategies related to strokes .(3)

The aim of my study is to enhance education and awareness among stroke patients through the implementation of a screening process utilizing questionnaires adopted by Ching et

al upon admission, coupled with a stroke educational module. The impact of this intervention will be evaluated using the same questionnaires, allowing for an assessment of the effectiveness of the stroke education module in improving patient knowledge and awareness.

Research questions:

1. What is the baseline of knowledge, attitude, and practice level of the admitted stroke patient?
2. How effective is stroke education module in improving stroke awareness?
3. What are the sociodemographic factors that contribute to the effectiveness of stroke education?

Research objectives and hypothesis:

Objectives

General:

To investigate the impact of stroke education module among stroke patients admitted as Inpatients at Hospital Sultan Abdul Aziz Shah, UPM.

Specific:

1. To determine the baseline demographic factor among stroke patients admitted as inpatients.
2. To determine the baseline Knowledge, Attitude, and Practices (KAP) level among stroke patients admitted as inpatients.
3. To assess the effectiveness of stroke education module on improving the levels of Knowledge, Attitude, and Practices (KAP).
4. To determine the association demographic factors with the level of Knowledge, Attitude, and Practices (KAP) among stroke patients admitted as inpatients

Null Hypothesis

1. The baseline demographic factor among stroke patients admitted as inpatients not identified
2. The baseline Knowledge, Attitude, and Practices (KAP) level among stroke patients admitted as inpatients is not identified
3. The effectiveness of stroke education module on improving the levels of Knowledge, Attitude, and Practices (KAP) is not identified
4. The association demographic factors with the level of Knowledge, Attitude, and Practices (KAP) among stroke patients admitted as inpatients is not identified

Research methodology:

Research Design: This is prospective questionnaire-based study

Study location: This study will be done Neurology Ward at Hospital Sultan Abdul Aziz Shah

Study population: The study population comprises stroke patients admitted to Hospital Sultan Abdul Aziz Shah (HSAAS).

Inclusion criteria for this study:

1. Patient and age more than 18 years old
2. Patient with MMSE more than 21
3. Patient with stroke diagnosed via Magnetic Resonance Imaging (MRI) or CT scan brain
4. Patient able to understand Malay or English language

Exclusion criteria for this study:

1. Patient who has global aphasia or dysphasia
2. Patient intubated
3. Patient with psychiatric illness and unable to give decision-making

4. Patient with altered consciousness
5. Patient with MMSE < 21

Sampling Type:

This study will be use convenient sampling as sampling type.

Sample size calculation:

$$\text{Sample size} = \frac{Z_{1-\alpha/2}^2 p(1-p)}{d^2}$$

Here

$Z_{1-\alpha/2}$ = Is standard normal variate (at 5% type 1 error ($P < 0.05$) it is 1.96 and at 1% type 1 error ($P < 0.01$) it is 2.58). As in majority of studies P values are considered significant below 0.05 hence 1.96 is used in formula.

p = Expected proportion in population based on previous studies or pilot studies.

d = Absolute error or precision – Has to be decided by researcher.

$$Z = 1.96$$

$$P = 87.6\% \text{ from Bidin et al., 2022}$$

Bidin MZ, Loh WC, Baharin J, Rashid AM, Ibrahim A, Hoo FK, Devaraj NK, Ching SM, Mat LN, Sulaiman WA, Basri H. The Effectiveness of Stroke Awareness Campaign in Promoting Knowledge on Stroke Among the Public in Malaysia.

$$d = 5\%$$

$$\text{calculated sample size: } 166.8 \sim 167$$

$$\text{Attrition rate: } 20\% \sim 167 + 33.4$$

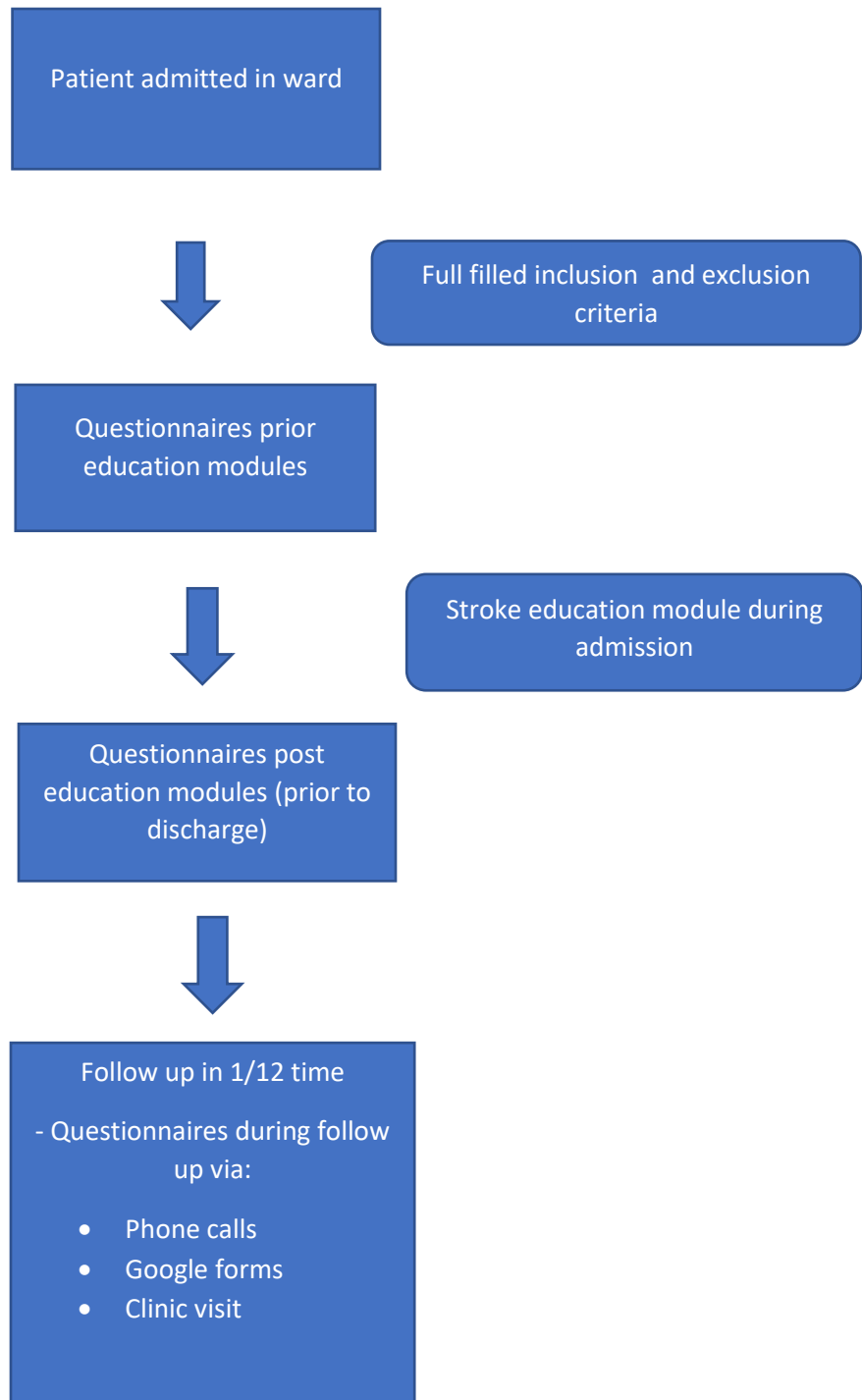
$$\text{Minimum sample size: } 201 \text{ patients}$$

Sampling method and subject recruitment:

All patients in neurology ward will be screened for eligibility to enter the research study. Those eligible patients who met the inclusion criteria will be seen during admission in ward and subsequently consent will be taken upon approval from patient. For those who agree to enter study will be assessed as below:

1. To collect sociodemographic characteristics and clinical data during interview session and via patient's record file (PutraHis)
2. Questionnaires will be given to participant in inclusion criteria to answer the questionnaires

Study flowchart:



Data collection Instruments:

This study will adopt validated questionnaire (Appendix 1) from a study done to assess stroke awareness on the public in Malaysia, which was developed per Malaysia clinical practice guideline (Ching et al., 2019). The content of the questionnaire was developed by three family medicine specialists and two senior consultant Neurologists. The questionnaire will be either in English or Malay language.

The questionnaire is self-administered, which consists of two parts and had a 'yes' and 'no' responses. The first section will explore the sociodemographic characteristics of the participants and their relevant past medical history. The second section will explore 3 main topics i.e. knowledge on stroke and recognition of stroke symptoms, attitude towards medical treatment of stroke and knowledge on actions to be taken during a stroke. The questionnaire that will be used is in Appendix 1.

The questionnaire will address the following:

1. Sociodemographic factors i.e. age, gender, ethnicity, education level, employment status, marital status and education level.
2. Self-reported risk factors i.e. smoking, alcohol, diabetes, hypertension, previous heart attack or stroke.
3. Knowledge on stroke:
 - Knowledge of organs affected by stroke.
 - Knowledge of important symptoms of a stroke.
 - Knowledge of risk factors for stroke.
 - Knowledge whether a stroke is preventable.
 - Knowledge on the effect of stroke on ADLs.
4. Knowledge of attitude on seeking medical treatment in stroke
5. Knowledge of actions to be taken during a stroke.

Stroke Education Module

Stroke Education Module will be created and adapted based on ANGELS Initiative International.

Content:

- What is a stroke? (Definition, types, and consequences)
- Stroke symptoms using the BEFAST mnemonic (Balance, Eyes, Face, Arm, Speech, Time)
- Risk factors for stroke (modifiable and non-modifiable)
- Appropriate actions to take when recognizing stroke symptoms (calling emergency services, noting the time, etc.)
- Preventive measures and lifestyle changes to reduce stroke risk

Delivery Methods:

- Direct health education lectures/sessions conducted by medical officers or nurses in the ward
 - Interactive and engaging presentations
- Daily reminders of the BEFAST mnemonic during ward rounds
 - Reinforcement of stroke symptom recognition
 - Involvement of healthcare team in education efforts
- Distribution of informative pamphlets/brochures on stroke during admission
 - Easy-to-understand and visually appealing materials
 - Patients can refer to them at their convenience
- Display of stroke awareness posters in the ward
 - Visually striking and concise information
 - Constant reminders for patients and visitors
- Online resources and health education talks on platforms like YouTube
 - Accessibility for patients and caregivers outside the hospital

Evaluation:

- Pre- and post-intervention assessments of patients' knowledge, attitudes, and practices (KAP) related to stroke
- Feedback from patients and caregivers on the effectiveness and usefulness of the education module

- Continuous improvement and adaptation of the module based on evaluation outcomes

Statistical analysis:

Statistical analysis will be performed using SPSS 22.0. In descriptive analysis, the baseline sociodemographic data for both groups will be described as percentages, while continuous data will be using mean \pm standard deviation (SD). A Kolmogorov-Smirnov and Shapiro-Wilk analysis will be used for the normality test. The data will be analysed using McNemar test to analyse pre and post KAP domain. A Chi-Square, Fisher's Exact test, Student T test, Mann-Whitney and One-way ANOVA for the association risk with the outcome.

Expected outcomes:

Stroke education modules play a vital role in promoting knowledge among patients admitted to public tertiary hospitals. These interventions have demonstrated effectiveness in improving patients' understanding of stroke risk factors, symptoms, and management options. However, challenges such as accessibility and cultural factors underscore the need for tailored and culturally sensitive educational strategies. Further research is warranted to explore innovative educational methods and assess the long-term impact of stroke education modules on patient outcomes.

Budget proposal:

This is a self-funding study. Financials mainly for stationaries and hardcopy of questionnaires as my study tools.

Privacy and confidentiality:

Confidentiality of this study will be maintained throughout the study in accordance with Malaysian Good Clinical practice.

Human ethics:

This study will be applying approval from Ethical committee UPM (JKEUPM) as requirement of study eligibility

Declaration of conflicts of interest:

The authors have no conflict of interest to declare. Publication and presentation result of this study will be submitted for thesis for Master of Internal Medicine university of Putra Malaysia

Risks or benefit to the subjects:

There is no risk to patients who participate in this study. All patients will be treated accordingly even after this study completed.

Gantt chart and milestones

	March2024- April 2024	May 2024- October2024	October 2024- December 2024	Jan 2025- March 2025	April 2025 – May 2025
Proposal					
Ethical approval					
Data collection					
Data analysis					
Project write up/submission					

References:

- 1.Tan KS, Venketasubramanian N. Stroke Burden in Malaysia. *Cerebrovasc Dis Extra*. 2022;12(2):58-62. doi: 10.1159/000524271. Epub 2022 Mar 24. PMID: 35325896; PMCID: PMC9149343.
- 2.Loo KW, Gan SH. Burden of Stroke in Malaysia. *International Journal of Stroke*. 2012;7(2):165-167. doi:10.1111/j.1747-4949.2011.00767.x
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5. Bidin, Mohammad Zulkarnain & Wei Chao, Loh & Baharin, Janudin & Abdul Rashid, Anna & Ibrahim, Azliza & Hoo, Fan & Devaraj, Navin Kumar & Ching, Siew mooi & inche mat, liyana najwa & Wan Sulaiman, Wan Aliaa & Basri, Hamidon & Yusof Khan, Abdul Hanif Khan. (2022). The Effectiveness of Stroke Awareness Campaign in Promoting Knowledge on Stroke Among the Public in Malaysia. 10.21203/rs.3.rs-1676500/v1.
- 6.Chu YM, Choi KS. Effectiveness of patient education in acute stroke: a comparison between a customised computer system and a pictorial information booklet. *BMJ Health Care Inform*. 2020 Aug;27(3):e100144. doi: 10.1136/bmjhci-2020-100144. PMID: 32816839; PMCID: PMC7430415
6. Ahn AB, Kulhari S, Karimi A, Sundararajan S, Sajatovic M. Readability of patient education material in stroke: a systematic literature review. *Top Stroke Rehabil*. 2023 Sep 19:1-16. doi: 10.1080/10749357.2023.2259177. Epub ahead of print. PMID: 37724783.

Appendix 1: Questionnaire/Borang Kaji Selidik

Section 1: Demographics

- 1.1 Interviewer center.....
- 1.2 Age/*Umur* (years/*tahun*) |_|_|_|
- 1.3 Gender/*Jantina*: ☐ Male (*Lelaki*) ☐ Female (*Perempuan*)
- 1.4 Marital status/*Status perkahwinan*: ☐ Married/*Berkahwin*
 ☐ Single- never married/*Bujang*
 ☐ Divorced/*Berceraai*
 ☐ Separated/*Berpisah*
 ☐ Widowed/*Janda atau duda*
- 1.6 Religion/ *Agama*: ☐ Islam/*Islam*
 ☐ Christian/*Kristian*
 ☐ Buddhist/*Buddhis*
 ☐ Hinduism/*Hindu*
 ☐ Traditional/*Tradisi*
 ☐ Other/*Lain-lain*.....
- 1.7 Highest level of education attained: ☐ None/*Tiada bersekolah*
Pendidikan tertinggi ☐ Primary (S1-6)/*Sekolah rendah (D1-D6)*
 ☐ Secondary (F1-5)/*Sekolah menengah (T1-T5)*
 ☐ Tertiary (University/college)/*Universiti/Kolej*
- 1.8 Do you have the following illness/*Adakah anda mempunyai penyakit dibawah?*
Please choose any of the followings/Sila pilih yang berkaitan.
☐ Hypertension/*Tekanan darah tinggi*
☐ Diabetes/*Kencing manis*
☐ Hypercholesterolemia/*Kolesterol tinggi*
☐ Previous heart attack/*Pernah mengalami serangan jantung*
☐ Previous stroke/*Pernah mendapat strok*
☐ Kidney disease/*Masalah buah pinggang*
☐ Other/*Lain-lain*.....
- 1.9 Do you know your blood pressure(BP) reading /aware your or hypertension status?
Adakah anda tahu bacaan tekanan darah anda?
- ☐ Yes /*Ya* ☐ No/*Tidak*

If yes, please proceed./Jika Ya, sila terus ke soalan berikutnya.

1.10 When you have your last BP measured? *Bila kali terakhir memeriksa tekanan darah?*

☐ Last year /*Tahun lepas* ☐ This year/*Tahun ini* ☐ Other/*Lain2.....*

1.11 Where you have your last BP measured? *Dimana anda memeriksa tekanan darah anda?*

☐ Clinic/*Klinik* ☐ Pharmacy/*Farmasi* ☐ Other/*Lain2.....*

Section 2: Knowledge about stroke /*Pengetahuan mengenai strok*

2.1 What organ of the body is affected by stroke?

Apakah organ yang terkesan dengan strok?

☐ Brain/*Otak* ☐ Heart /*Jantung*
☐ Kidney/*Buah pinggang* ☐ Liver/*Hati*
☐ Lungs/*Paru-paru* ☐ Don't know/*Tidak tahu*
☐ Other/*Lain2.....*

2.2 Is stroke preventable? *Adakah strok dapat dicegah?:*

☐ Yes/*Ya* ☐ No/*Tidak*

2.3 Can a person have stroke more than once? *Bolehkah seseorang mengalami strok lebih dari sekali?*

☐ Yes/*Ya* ☐ No/*Tidak*

2.4 Does stroke have an effect on daily activities like driving a car, dressing, use of the toilet and having a job? *Adakah strok akan memberi kesan terhadap kegiatan seharian anda seperti memandu kereta, memakai baju, menggunakan tandas dan pekerjaan anda?*

☐ Yes/*Ya* ☐ No/*Tidak*

What do you believe causes a stroke? *Apakah penyebab stroke?*

Can choose more than one/*Boleh pilih lebih dari satu.*

☐ Demons/*Kuasa jahat* ☐ Hypertension/*Tekanan darah tinggi* ☐ Don't know/*Tidak tahu*
☐ Witch craft/*Sihir* ☐ Cigarette smoking/*Merokok* ☐ Bad diet/*Diet tidak sihat*
☐ God's will/*Kuasa tuhan* ☐ Fatty foods/*Makanan berlemak* ☐ Alcohol/*Alkohol*
☐ Atherosclerosis/*Ateroskelorosis* ☐ High cholesterol/*tinggi kolesterol*
☐ Stress/*Tekanan perasaan* ☐ Angry ancestral spirits/*roh yang marah*
☐ Obesity/*Kegemukan*

- ☐ Oral contraceptives/*Pil perancang* ☐ Lack of exercise/*Kurang bersenam*
☐ Inheritance/*Diwarisi*
☐ Others/*Lain2*

What do you believe are risk factors for stroke? *Apakah faktor risiko penyakit strok?*

- 2.5 Do you know any risk factors for stroke? ☐ Yes/*Ya* ☐ No/*Tidak*
Adakah anda tahu faktor risiko strok?

If Yes, what are the risk factors for stroke that you know of? Please tick all that applies
Jika ya, apakah faktor risiko penyakit strok? Sila pilih yang mana berkenaan.

- | | |
|--|---|
| <input type="checkbox"/> Old age/ <i>Umur tua</i> | <input type="checkbox"/> Hypertension/ <i>Darah tinggi</i> |
| <input type="checkbox"/> Diabetes/ <i>Kencing manis</i> | <input type="checkbox"/> Cigarette smoking/ <i>Merokok</i> |
| <input type="checkbox"/> Heart disease/ <i>Penyakit jantung</i> | <input type="checkbox"/> Alcohol/ <i>Alkohol</i> |
| <input type="checkbox"/> Atherosclerosis / <i>Ateroskelorosis</i> | <input type="checkbox"/> High cholesterol/ <i>Kolesterol tinggi</i> |
| <input type="checkbox"/> Obesity/ <i>Kegemukan</i> | <input type="checkbox"/> Genetics (hereditary)/ <i>Diwarisi</i> |
| <input type="checkbox"/> Stress/ <i>Tekanan</i> | <input type="checkbox"/> Lack of exercise/ <i>Kurang bersenam</i> |
| <input type="checkbox"/> Poor hygiene/ <i>Kurang kebersihan diri</i> | <input type="checkbox"/> Migraine/ <i>Migrain</i> |
| <input type="checkbox"/> Cancer / <i>Kanser</i> | <input type="checkbox"/> Oral contraceptives/ <i>Pil perancang</i> |
| <input type="checkbox"/> Bad diet/ <i>Diet tidak seimbang</i> | <input type="checkbox"/> Tremors/ <i>Getaran</i> |
| <input type="checkbox"/> Others/ <i>lain2</i> | |

Knowledge of stroke warning signs/*Pengetahuan mengenai tanda-tanda strok*

- 2.6 Do you know any warning signs of stroke? *Adakah anda tahu tanda-tanda strok?*
☐ Yes /*Ya* ☐ No/*Tidak*

- 2.7 If Yes, what are the warning signs of stroke that you know of? Please tick all that applies
Jika ya, apakah tanda-tanda strok yang anda tahu? Sila pilih yang berkenaan.

- ☐ Dizziness/*Pening*
☐ Blurred or double vision or loss of vision/*Pandangan kabur atau Nampak dua atau hilang penglihatan*
☐ Headache/*Sakit kepala*
☐ Fainting black out collapse/*Pengsan*
☐ Sudden difficulty in speaking or understanding or reading/*Tiba-tiba susah bercakap atau memahami sesuatu atau membaca*
☐ Weakness of any part of the body/*Lemah di mana-mana bahagian badan*
☐ Weakness of one side of the body/*Lemah sebelah badan*
☐ Paralysis of any part of the body/*Lumpuh mana-mana bahagian badan*
☐ Paralysis of one side of the body/*Lumpuh sebelah badan*
☐ Numbness of any body part /*Kebas mana-mana bahagian badan*

- ☐ Numbness one side of the body/*Kebas sebelah badan*
- ☐ Tiredness /*Penat*
- ☐ Fever/*Demam*
- ☐ Shortness of breath/*Susah bernafas*
- ☐ Chest pain or chest tightness/*Sakit dada*
- ☐ Nausea/vomiting/*Mual atau muntah*
- ☐ Others /*Lain...*

Section 3: Action to be taken during stroke/*Tindakan diambil ketika strok*

What would be your planned response to an event of stroke? *Apakah yang anda akan lakukan jika berlakunya stroke*

Please choose one/*Sila pilih satu*

- ☐ Call general practitioner or family doctor/*Memanggil doctor klinik atau doktor keluarga*
- ☐ Ask family members or relatives to help/*Memanggil ahli keluarga untuk membantu*
- ☐ Go to chemist for advice or medication/*Pergi ke farmasi untuk nasihat atau membeli uba*
- ☐ Self medication/*Rawatan sendiri*
- ☐ Ask friend or neighbours for help/*Meminta bantuan kawan atau jiran*
- ☐ Go to hospital on the same day/*Pergi ke hospital pada hari sama*
- ☐ Go to hospital within 4.5 hours/*Pergi ke hospital dalam 4.5 jam yang pertama*
- ☐ Visit community health centre/*Pergi ke klinik kesihatan*
- ☐ Visit alternative health care providers/*Pergi ke rawatan alternatif*
- ☐ Seek spiritual healing (prayer)/*Pergi mendapat rawatan syifa atau berdoa*
- ☐ Invite a Physiotherapist/*Pergi ke rawatan fisioterapi*
- ☐ Others (please specify)/*Lain-lain (sila nyatakan)...*

Section 4: Attitude towards medical treatment

Will you go to see medical treatment if you have stroke? *Adakah anda akan mendapatkan rawatan kesihatan jika mendapat stroke?*

- ☐ I will go to hospital/medical facilities only /*Saya akan mendapatkan rawatan kesihatan dari fasiliti kesihatan atau hospital*
- ☐ I will go for complementary and traditional medication/*Saya akan mendapat rawatan komplementari dan tradisional*
- ☐ I will go for faith treatment/*Saya akan mendapat rawatan syifa atau berdoa*
- ☐ I will get combination of hospital and complementary traditional medication/*Saya akan mendapatkan rawatan hospital dan rawatan komplementari/tradisional*
- ☐ I will get combination of hospital and faith treatment/*Saya akan mendapatkan rawatan hospital dan rawatan syifa atau berdoa*

Sources of information about stroke/<i>Sumber pengetahuan tentang stroke</i>

What are your sources of information about stroke? Please tick all that applies
Apakah sumber informasi anda mengenai stroke? Sila pilih yang berkenaan

- ☐ Health care providers /*Pengamal kesihatan*
- ☐ Friends and relatives /*Rakan-rakan dan sedara mara*
- ☐ Radio/*Radio* ☐ TV/*Television*
- ☐ News papers/*Surat Khabar*
- ☐ Electronic media /*Media elektronik*
- ☐ Others (please specify) /*Lain2 (sila nyatakan).....*



BORANG 2.4: PENERANGAN DAN PERSETUJUAN RESPONDEN

Sila baca maklumat berikut dengan teliti. Sekiranya anda mempunyai sebarang pertanyaan, sila kemukakan kepada penyelidik.

1.TAJUK KAJIAN

Kesan modul pendidikan strok dalam meningkatkan pengetahuan mengenai strok di kalangan pesakit yang dirawat di hospital awam peringkat tertiar.

2. PENGENALAN

Strok merupakan satu cabaran kesihatan yang kritikal di Malaysia, menjadi punca utama kematian dan kecacatan. Data terkini menunjukkan peningkatan yang mengkhawatirkan dalam insiden strok di kalangan kumpulan umur yang lebih muda dan peningkatan prevalen faktor risiko seperti diabetes dan obesiti. Mengatasi beban ini memerlukan usaha kesihatan awam yang komprehensif, termasuk intervensi pendidikan yang terbukti berkesan dalam meningkatkan pengetahuan dan mempromosikan tingkah laku preventif. Kajian ini bertujuan untuk menilai keberkesanan modul pendidikan strok dalam meningkatkan pengetahuan di kalangan pesakit di sebuah hospital awam peringkat tertiar di Malaysia. Dengan memberdayakan individu dengan kesedaran strok, intervensi ini berpotensi untuk memudahkan perubahan tingkah laku positif, pada akhirnya menyumbang kepada pencegahan strok dan peningkatan hasil pesakit.

3. APAKAH YANG PERLU ANDA LAKUKAN?

Jika anda bersetuju untuk menyertai kajian ini, anda dijemput untuk mengisi borang soal selidik yang akan diberikan kepada anda semasa kemasukan dan sebelum keluar wad dengan siri pendidikan dan kuliah akan diberikan semasa tinggal di wad dan borang soal selidik yang sama akan diberikan kepada anda selepas 1 bulan selepas keluar wad.

4. SIAPA YANG TIDAK BOLEH MENYERTAI KAJIAN INI?

Pesakit yang memenuhi kriteria pengeluaran:

- 1.Pesakit yang tidak boleh bercakap
- 2.Pesakit yang dipasang tiub pernafasan
- 3.Pesakit dengan penyakit psikiatrik dan tidak dapat membuat keputusan
- 4.Pesakit dengan kesedaran terganggu
- 5.Pesakit dengan skor MMSE < 21

5. APAKAH FAEDAH MENYERTAI KAJIAN INI?

a)KEPADA ANDA SEBAGAI PESERTA?

Anda akan mendapat pengetahuan mengenai pengenalan gejala stroke dan tindakan yang perlu diambil semasa strok.

b) KEPADA PENYELIDIK?

1. Kami akan dapat mengenal pasti pengetahuan asas mengenai strok di kalangan orang ramai di Malaysia.
2. Kami akan dapat menilai keberkesanan modul pendidikan kesihatan strok dalam meningkatkan kesedaran di kalangan orang ramai.

6. ADAKAH IA BERISIKO?

Kajian ini tiada risiko kepada pesakit.

7. ADAKAH MAKLUMAT DAN IDENTITI SAYA KEKAL RAHSIA?

Maklumat dan identiti anda akan kekal rahsia dan hanya akan diketahui dikalangan penyelidik-penyelidik kajian ini. Anda boleh menarik diri dari kajian ini pada bila masa jika anda ingin.

8. SIAPA YANG SAYA PERLU HUBUNGI SEKIRANYA SAYA MEMPUNYAI SOALAN TAMBAHAN SEMASA MENGIKUTI PENYELIDIKAN INI?

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Jika anda mempunyai sebarang pertanyaan berkaitan dengan hak-hak anda sebagai peserta dalam penyelidikan ini, sila hubungi: Sekretariat, JKEUPM, melalui email: jkeupm@upm.edu.my

Sila tandatangan di sini sekiranya anda telah membaca dan memahami kandungan halaman ini _____

9. PERSETUJUAN

Saya..... No Kad Pengenalan.
beralamat.....
.....dengan ini bersetuju untuk mengambil bahagian secara sukarela dalam
penyelidikan yang tersebut di atas *(kajian klinikal/percubaan ubat-ubatan/rakaman video/kumpulan
sasaran/temuduga/ soal selidik).

Saya telah diberi penjelasan secara menyeluruh mengenai penyelidikan ini dari segi metodologi, risiko
dan komplikasi (seperti tertulis pada Helaian Penerangan Responden). Saya memahami bahawa saya
berhak menarik diri dari penyelidikan ini pada bila-bila masa tanpa memberi sebarang alasan. Saya juga
memahami bahawa sebarang maklumat yang berkaitan identiti saya akan dirahsiakan.

Saya* berminat / tidak berminat untuk mengetahui keputusan kajian yang melibatkan saya.

I setuju/tidak bersetuju untuk imei/gambar/rakaman video/ rakaman suara digunakan dalam apa jua
bentuk penerbitan atau pembentangan. (sekiranya berkaitan).

*potong yang tidak berkenaan

Tandatangan
(Responden)

Tandatangan
(Saksi)

Tarikh :

Nama :

No. K/P:

Saya mengesahkan bahawa saya telah menerangkan kepada responden ini sifat dan tujuan
penyelidikan yang tersebut di atas.

Tarikh

Tandatangan
(Penyelidik)



FORM 2.4: RESPONDENT'S INFORMATION SHEET AND INFORMED CONSENT FORM

Please read the following information carefully and do not hesitate to discuss any questions you may have with the researcher.

1. STUDY TITLE :

The effectiveness of stroke education module in promoting knowledge of stroke among patients admitted at public tertiary hospital

2. INTRODUCTION:

Strokes are a major health issue in Malaysia, causing many deaths and disabilities. Alarmingly, more young people are having strokes, and conditions like diabetes and obesity that increase stroke risk are becoming more common. To address this problem, public health efforts are needed, including educational programs proven to improve knowledge and promote preventive actions. This study aims to evaluate if a stroke education program for patients at a public hospital in Malaysia effectively increases their stroke knowledge. The goal is that by better understanding strokes, patients will be empowered to make positive lifestyle changes like improving diet, exercising, and managing diseases. Ultimately, this could help prevent strokes and lead to better overall health outcomes.

3. WHAT WILL YOU HAVE TO DO?

If you agree to join this study, you are invited to fill in a questionnaire that will be given to you during admission and prior discharge with series of education and lectures will be given during stay in ward and the same questionnaires will be given to you after 1 month after discharge

4. WHO SHOULD NOT PARTICIPATE IN THE STUDY?

Patient that fit into exclusion criteria:

1. Patient who has global aphasia or dysphasia
2. Patient intubated
3. Patient with psychiatric illness and unable to give decision-making
4. Patient with altered consciousness
5. Patient with MMSE < 21

5. WHAT WILL BE THE BENEFITS OF THE STUDY:

(a) TO YOU AS THE SUBJECT?

You will gain knowledge on stroke symptoms recognition and actions to be taken during stroke.

(b) TO THE INVESTIGATOR?

- a. We will be able to identify baseline knowledge of stroke among public in Malaysia.
- b. We will be able to assess the effectiveness of our education module in raising awareness among the public.

6. WHAT ARE THE POSSIBLE RISKS?

There are no possible risk associated with this study.

7. WILL THE INFORMATION THAT YOU PROVIDE AND YOUR IDENTITY REMAIN CONFIDENTIAL?

Your information and identity will remain confidential and will only be known among investigators of this study. You can withdraw from this study at any point if you wish.

8. WHO SHOULD YOU CONTACT IF YOU HAVE ADDITIONAL QUESTIONS DURING THE COURSE OF THE RESEARCH?

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If you have any questions about your rights as a participant in this study, please contact:
The Secretariat, JKEUPM, at email address **jkeupm@upm.edu.my**

Please initial here if you have read and understood the contents of this page_____

9. CONSENT

I Identity Card No.
address.....
.....hereby voluntarily agree to take part in the research stated
above *(clinical /drug trial/video recording/ focus group/interview-based/ questionnaire-based).

I have been informed about the nature of the research in terms of methodology, possible adverse effects and complications (as written in the Respondent's Information Sheet). I understand that I have the right to withdraw from this research at any time without giving any reason whatsoever. I also understand that this study is confidential and all information provided with regard to my identity will remain private and confidential.

I* wish / do not wish to know the results related to my participation in the research

I agree/do not agree that the images/photos/video recordings/voice recordings related to me be used in any form of publication or presentation (if applicable)

* delete where necessary

Signature
(Respondent)

Signature
(Witness)

Date :.....

Name :.....

I/C No. :.....

I confirm that I have explained to the respondent the nature and purpose of the above-mentioned research.

Date

Signature
(Researcher)