Community Knowledge and Determinants of Conventional and Traditional Medicine Utilization: Preliminary Study

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Abstract
A preliminary study has been done to evaluate the perspective of community about the utilization of traditional medicine and conventional medicine. The objective of this study is to examine the understanding and perspective of the community on the utilization of conventional and traditional medicine. A random sample of 174 respondents were selected for this investigation. This survey employs a 5-point Likert scale and consists of four primary sections: demographics, assessing the community's knowledge, exploring the community's perspectives and perceptions, and investigating the variables that influence the community's preference for traditional or mainstream medicine. The results of this survey suggest that most of the respondents have existing knowledge about traditional medicine and generally have a positive attitude towards its use. Noteworthy discoveries have been made regarding the elements that impact the decision-making process between traditional and conventional medicine among respondents of different age groups. Influences have been exerted by factors such as health conditions, types of diseases, availability, pricing, and social media. These findings highlight the need for more research on the acceptance of traditional medicine. In the future, traditional medicine may be considered as alternative yet dependable medical therapies that can be incorporated into Malaysia's healthcare system.
Keywords: Knowledge, Community, Traditional Medicine, Conventional Medicine

Introduction

Traditional medicine and conventional medicine are two separate healthcare methodologies with long historical practices. Traditional medicine encompasses the customs and wisdom that have been transmitted over generations within a specific culture or society. These techniques frequently include natural medicines like herbs and plants and may include spiritual or religious beliefs. Conventional medicine is the modern scientific healthcare method generally implemented in most nations. Conventional medicine relies on scientific data, clinical trials, and rigorous testing of pharmaceutical medications and medical treatments. Traditional medicine and mainstream medicine have distinct approaches and techniques, each with its own advantages and benefits. Traditional and Complementary Medicine (T&CM) is a historic medical practice that existed before the integration of contemporary scientific principles into healthcare[1]. It has developed gradually and is based on several cultural traditions and intellectual concepts. T&CM provides a range of treatments and therapies that are typically viewed as more holistic and natural than traditional medicine. These therapies typically emphasize enhancing general health and well-being, rather than solely addressing individual symptoms or illnesses. T&CM considers the interdependence of the mind, body, and spirit in relation to health. T&CM remain a primary form of healthcare in resource-limited areas, despite advances in science and globalization. It is highly regarded for its extensive history of utilization and its comprehensive approach to promoting recovery. Traditional medicine is frequently more accessible and cost-effective in specific areas, serving as a vital healthcare option for many populations. Overall, traditional, and conventional medicine have different approaches and practices, but both have their own advantages and are recognized for their contributions to healthcare.

Malaysia has a varied range of traditional and alternative medicine practices that cater to its multiethnic population, showcasing the country's rich cultural background. Malaysia acknowledges and governs different types of traditional and complementary medicine, such as Traditional Malay Medicine, Traditional Chinese Medicine, and Traditional Indian Medicine[2]. The usage of T&CM is widespread among the populace, with herbal-based therapies being especially favoured for managing health issues[2,3]. In Malaysia, T&CM encompasses Traditional Malay Medicine, Traditional Chinese Medicine, and Traditional Indian Medicine, showcasing the diverse therapeutic techniques in the country[1]. The widespread use of T&CM, especially herbal-based therapies, is prominent among the Malaysian populace (**Table 1.**), highlighting its importance in the country's healthcare system[2,3]. Regulatory authorities such as the Traditional and Complementary Medicine Division (T&CMD) of the Malaysian National Pharmaceutical Regulatory Agency (NPRA) have been set up to supervise and control these practices, guaranteeing safety and quality requirements. T&CM has been included into the national healthcare system to include traditional practices with conventional treatment[1]. Patients undergoing haemodialysis often use alternative therapies such as acupuncture and massage in addition to conventional treatments, emphasizing the supportive role these techniques have in healthcare. These observations highlight the necessity of continuous study and regulation to maintain the safe and efficient use of T&CM practices in Malaysia[4].

Table 1
Selected T&CM in Malaysia with regards to cross-sectional study

Method	Result	References
- Cross-sectional study conducted on 90 respondents from selected longhouses in Sarawak. - Data collected through face-to-face interviews using a questionnaire.	- The prevalence of TCM use among respondents was 70%. - The rate of disclosure of TCM use among respondents was 27%.	5
- Cross-sectional study assessing prevalence, types, predictors, and impact of CAM use among adult PWE - Logistic regression analysis to identify predictors of CAM usage	- 25.7% of adult patients with epilepsy in Malaysia used complementary and alternative medicine (CAM) for seizure control. - Common CAM used were prayers, traditional herbal remedies, massage, and acupuncture.	6
- Cross-sectional study conducted at a university primary care clinic - Patient Assessment of Chronic Illness Care - Malay version (PACIC-M) questionnaire used	- 66.9% of participants with MetS were TCM users - TCM users had higher mean PACIC-M score compared to non-users	7
- The study used a survey to assess the usage of traditional, complementary, and alternative medicine (TCAM) among diabetic patients. - The respondents were divided into TCAM users and non-TCAM users.	- Diabetic patients using TCAM had better physical and overall quality of life. - TCAM users had lower rates of coma, stroke, and kidney problems.	8
- Cross-sectional study conducted among postpartum women at a rural health clinic. - Convenience sampling method used for data collection.	- The prevalence of TCM use during the postpartum period was 66.2%. - Malays and those with low monthly household income were more likely to use TCM.	9
- Cross-sectional quantitative study conducted on 105 patients with diabetes - Validated questionnaires used to measure knowledge and attitude towards TCM	- Majority of patients have poor knowledge and attitude towards TCM - 90% of patients conceal their usage of TCM from healthcare professionals	10
- Cross-sectional evaluation of complementary and alternative medicine (CAM) use - Investigation of CAM use with cultural influence, perceived health status, gender, and age	- Massage, Vitamin supplements, Herbal medicine, and traditional Chinese medicine are popular CAM modalities. - CAM use is high among those with Malay or Chinese cultural influence.	11
- Cross-sectional study conducted in private haemodialysis centres throughout Malaysia	- 64.7% of haemodialysis patients reported using traditional and complementary medicine (TCM).	4

- Validated questionnaire-based face-to-face interviews with haemodialysis patients	- Herbal treatment and non-prescribed supplementation were the most used types of TCM.	
- Individual in-depth interviews with village shamans and midwives - Participant observation technique to collect information directly from the community	- The study found that the Melanau community continues to use plants in traditional medicine. - Medicinal plants are used for both curing and preventing diseases.	12
- Cross-sectional survey using questionnaires to collect data on CAM usage - Extraction of patients' comorbidities and serum creatinine from medical notes	- The prevalence of CAM use among Malaysian CKD patients was 29%. - The use of CAM did not influence the progression of CKD.	13

In January 2006, the Cabinet approved the Ministry of Health Malaysia's proposal to establish an integrated hospital, signifying the integration of Traditional and Complementary Medicine (PT&K) services into the national healthcare system[14]. In the Ninth Malaysia Plan, three public hospitals were identified as pioneers in implementing the PT&K service, namely Hospital Kepala Batas in Penang in 2007, Hospital Putrajaya in the Federal Territory of Putrajaya, and Hospital Sultan Ismail in Johor in 2008. By the year 2022, the government has added a total of 14 new facilities for PT&K services in states such as Sabah, Sarawak, Kedah, Pahang, and others. On March 1, 2013, PT&K was restructured and incorporated into the medical program.

This restructuring aims to strengthen the PT&K services in government facilities and ensure that the development of direction, policies, strategies, and activities are consistent with the goals of the health program. The six types of PT&K services provided are traditional massage, traditional postnatal care, acupuncture, herbal therapy as an additional treatment for cancer, Shirodhara therapy, and external Basti therapy. By 2018, the Ministry of Health Malaysia (KKM) developed the Traditional Postnatal Care Transformation Plan (PTP). The plan aims to elevate the PTP service at public hospitals to the level of primary healthcare. The Traditional and Complementary Medicine Act (Act 775) was declared on March 10, 2016, and gradually came into effect on August 1, 2016. The PT&K regulations came into effect on March 1, 2021, and the phased implementation of professional PT&K registration nationwide has commenced. PT&K practitioners with qualifications and skills approved by the PT&K Council can be registered and obtain a Registered Practitioner Certificate to offer PT&K services to the community.

Despite the government offering options for using traditional medicine and conventional therapies, their acceptance is still very low, likely due to many other considerations. Youth in Malaysia use traditional medicine less than older generations, with studies indicating that they are more inclined to integrate it with Western care rather than use it alone. Key findings show that young adults prefer integrating traditional and conventional medicine over middle-aged and elderly adults[2,15]. Furthermore, those who have not attended school are more likely to rely only on traditional medicine, but its use declines with increasing education levels. Across all income levels, the usage of traditional medicine rises with age, showing that younger people are less likely to rely entirely on it. Overall, traditional medicine usage in

Malaysia is declining as people get older and more educated. Despite the lack of transparency on community knowledge and the factors impacting conventional and traditional medicine use, extended studies are needed.

Comprehending the complexities of community knowledge and the factors that affect the use of conventional and traditional medicine is essential for enhancing healthcare results and creating successful treatments. This preliminary study intends to investigate knowledge and factors influencing the utilization patterns of conventional and traditional medicine within communities to address the gap in understanding. The goal is to pinpoint factors that influence the acceptance of both conventional and traditional medicine. This will offer valuable information for healthcare professionals, policymakers, and researchers to create customized approaches that encourage comprehensive healthcare practices in communities.

Materials and Methods
Study Setting
The total on 174 respondents in this study were chosen at random throughout Malaysia.

Ethics
The study was conducted in accordance with our institutional ethical guidelines and was conducted with high regards for ethics and personal rights of participants. Information was obtained anonymously, and each respondent was adequately informed about the aims, methods and expected benefits of the study. They were also made to be aware that they were at liberty to freely abstain from participation at any time. Questionnaires were given only after obtaining informed consent of participants.

Study Questionnaire
The study employed a validated, self-complete questionnaire consisting of 4 broad domains which are demography, studying knowledge community, study the views and perceptions of the community and study selection factors society towards the use of traditional medicine and conventional medicine. This questionnaire uses a 5-point Likert scale. Participants were allowed to give multiple responses in the open-ended questions. The questions were validated by the lecturer teaching for this course.

Data Collection
The survey was conducted over a few days period, between 24 December 2023 until 1st January 2024 by using the *Google Form*. Questionnaires were anonymous with no identifier linking the questionnaire directly to the participant. Respondents who were all sufficiently literate self-completed the questionnaire; however, guidance was provided by investigators to any respondent who requested help in providing responses to the questions.

Data Analysis
The data were analyzed using the Statistical Package for Social Science (version 22). Data is displayed using descriptive statistics, which include frequencies and percentages. Reliability study was conducted to determine the internal consistency and reliability of the items employed. Pearson's Chi-square was used to examine the correlations between respondents' gender, age group, educational level, and job type and their perception of a selected item from knowledge, as well as the factors influencing society's choice of traditional or

mainstream medicine. To assess the significance of knowledge and determinants of choice among demographic characteristics, a one-way ANOVA was used. The knowledge and factors index were calculated by taking the average 5-point Likert scale for knowledge and factor-related items. The scores ranged from "1" (strongly disagree) to "5" (strongly agree). A threshold score of 3.0 was employed, with mean indices above 3.0 representing positive agreement and those below 3.0 representing negative disagreement. P-values < 0.05 were used to determine statistically significant associations and influences.

Results and Discussions

Demographics of Respondents

A total of 174 respondents took part in the study of which 90 (51.7%) were male while 84 (48.3%) were female as shown in **Table 2**. Majority of the respondents 105 (60.3%) were fell under youth, for those age between 15 to 40 years old, while 69 (39.7%) fell above 40 years old which remarked as not youth. It was also observed that 164 (94.3%) of the respondents were Muslim, which reflected most of them 163 (93.7%) were Malay ethnic. The rest of them were non-Muslim 10 (5.7%), in which distributed from China, India and Indigenous people. The highest proportion of respondents, 82 (47.1%), were from the Middle state zone comprising Selangor, Putrajaya and Kuala Lumpur. More details on the state zone breakdown of participants are given in **Table 2**. In addition, most of respondents 74 (42.5%) have gotten bachelor's degree qualification. It also shown almost an even distribution from the pre-university 46 (26.4%) and secondary school leaver 47 (27.0%), while 7 (4.0%) of them had advanced higher education qualifications (master's degree). The demographics of respondents showed 65 (37.4%) of respondents were public servant, while 35 (20.1%) worked in private sectors and 74 (42.5%) fell under other category in which denoted for students, freelancers and unemployed.

Table 2

Demographics of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Gender					
Valid	**Female**	84	48.3	48.3	48.3
	Men	90	51.7	51.7	100.0
	Total	174	100.0	100.0	
Age Group					
Valid	**NOT YOUTH**	69	39.7	39.7	39.7
	YOUTH	105	60.3	60.3	100.0
	Total	174	100.0	100.0	
Religion					
Valid	**BUDDHA**	2	1.1	1.1	1.1
	CHRISTIAN	1	.6	.6	1.7
	HINDU	7	4.0	4.0	5.7
	ISLAM	164	94.3	94.3	100.0
	Total	174	100.0	100.0	
Nation					
Valid	**CHINA**	3	1.7	1.7	1.7
	INDIA	6	3.4	3.4	5.2

	INDIGENOUS PEOPLE	2	1.1	1.1	6.3
	MALAY	163	93.7	93.7	100.0
	Total	174	100.0	100.0	
State Zone*					
Valid	EAST	19	10.9	10.9	10.9
	EAST MALAYSIA	1	.6	.6	11.5
	MIDDLE	82	47.1	47.1	58.6
	NORTH	37	21.3	21.3	79.9
	SOUTH	35	20.1	20.1	100.0
	Total	174	100.0	100.0	
Education Category					
Valid	ADVANCED HIGHER EDUCATION	7	4.0	4.0	4.0
	HIGHER EDUCATION	74	42.5	42.5	46.6
	PRE-UNIVERSITY	46	26.4	26.4	73.0
	SECONDARY	47	27.0	27.0	100.0
	Total	174	100.0	100.0	
Job Category					
Valid	OTHER	74	42.5	42.5	42.5
	PRIVATE	35	20.1	20.1	62.6
	PUBLIC	65	37.4	37.4	100.0
	Total	174	100.0	100.0	

*State zone (East=Pahang, Terengganu, Kelantan), (East Malaysia=Sabah, Sarawak), (Middle=Selangor, Kuala Lumpur), (North=Perlis, Perak, Pulau Pinang, Kedah), (South=Negeri Sembilan, Melaka, Johor)

Consistency and Stability of Measurements
Reliability analysis, often measured using Cronbach's Alpha coefficient, is essential for assessing the consistency and stability of measurements in a research tool or questionnaire. Cronbach's Alpha is a statistical measure that assesses the internal consistency of items on a scale, with higher values indicating increased reliability. Expanding on the reliability analysis requires evaluating the Cronbach's Alpha value in connection to the study's goals and environment**. As shown in Table 3.**, Cronbach's Alpha above 0.70 suggests a high level of internal consistency among the items, implying that for knowledge (0.772) and factors (0.770) related items reliably measure the same underlying construct. A low Cronbach's Alpha for perception (0.562) related items may suggest inconsistencies or heterogeneity among the items, which could signal concerns such item repetition or ambiguity, warranting additional research.

Table 3
Reliability Analysis

Scale	Cronbach's Alpha
Knowledge of the use of traditional medicine and conventional medicine	0.772
Perception of the effectiveness of traditional medicine and conventional medicine	0.562
Factors of society's choice of traditional medicine or conventional medicine	0.770

Knowledge of Respondents on the use of Traditional Medicine and Conventional Medicine
Majority of respondents agree that their knowledge on the use of traditional and conventional medicines are fell under positive agreement with average total knowledge index (KI) 3.66 (**Table 4.**). About 79 (45.4%) agreed they have used traditional medicine to treat their illness or for health. Most of them 79 (45.4%) agreed that education and awareness on traditional medicine should be highlighted to the community. The information gain from traditional or conventional medicine, play an important role for 85 respondents (48.9%) to make any treatment decisions. In addition, 79 (45.4%) of respondents agreed that exposure to various cultures influenced their perception of traditional and conventional medicine. Above all, majority of respondents agreed that the social stigma against the use of traditional or conventional medicine in society in their view were due to the lack of understanding and education (100, 57.5%), cultural beliefs (102, 58.6%), stereotyping against conventional medicine (100, 57.5%), perception against mental illness (75, 43.1%), believing that alternative medicine is ineffective (66, 37.9%), and influence of the media (80, 46.0%).

Table 4
The Knowledge and Factor Index for Knowledge and Factor-Related Items

Knowledge and Factors-related items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Knowledge/Factors Index*
I have used traditional medicine to treat my illness or health. (K1)	10 (5.7%)	8 (4.6%)	37 (21.3%)	79 (45.4%)	40 (23.0%)	3.75
I think education or more awareness of traditional medicine in the community needs to be highlighted. (K2)	0 (0.0%)	5 (2.9%)	48 (27.6%)	79 (45.4%)	42 (24.1%)	3.91
Does expanding information about traditional or conventional medicine play a role	2 (1.1%)	6 (3.4%)	36 (20.7%)	85 (48.9%)	45 (25.9%)	3.95

in your treatment decisions? (K3)						
Exposure to various cultures influenced my perception of traditional and conventional medicine. (K4)	3 (1.7%)	8 (4.6%)	39 (22.4%)	79 (45.4%)	45 (25.9%)	3.89
Social stigma against the use of traditional or conventional medicine in society in my view is [Lack of understanding and education] (K6)	5 (2.9%)	19 (10.9%)	29 (16.7%)	100 (57.5%)	21 (12.1%)	3.65
The social stigma against the use of traditional or conventional medicine in society in my view is [Stigma against cultural beliefs] (K7)	2 (1.1%)	14 (8.0%)	36 (20.7%)	102 (58.6%)	20 (11.5%)	3.71
The social stigma against the use of traditional or conventional medicine in society in my view is [Stereotyping against conventional medicine] (K8)	1 (0.6%)	21 (12.1%)	29 (16.7%)	100 (57.5%)	23 (13.2%)	3.71
The social stigma against the use of traditional or conventional medicine in society in my view is [Stigma against mental illness] (K9)	10 (5.7%)	44 (25.3%)	24 (13.8%)	75 (43.1%)	21 (12.1%)	3.30
The social stigma against the use of traditional or conventional medicine in society	14 (8.0%)	46 (26.4%)	28 (16.1)	66 (37.9%)	20 (11.5%)	3.18

in my view is [Believing that alternative medicine is ineffective] (K10)						
The social stigma against the use of traditional or conventional medicine in society in my view is [Influence of the media of the time] (K11)	10 (5.7%)	24 (13.8%)	32 (18.4%)	80 (46.0%)	28 (16.1%)	3.53
Overall knowledge index (KI)						**3.66**
Factors that influence my decision in choosing between traditional and conventional medicine. [Health Conditions and Types of Diseases] (F2)	0 (0.0%)	6 (3.4%)	21 (12.1%)	97 (55.7%)	50 (28.7%)	4.10
Factors that influence my decision in choosing between traditional and conventional medicine. [Effectiveness and Scientific Evidence] (F3)	0 (0.0%)	5 (2.9%)	33 (19.0%)	86 (49.4%)	50 (28.7%)	4.04
Factors that influence my decision in choosing between traditional and conventional medicine. [Culture and Personal Values] (F4)	1 (0.6%)	24 (13.8%)	37 (21.3%)	90 (51.7%)	22 (12.6%)	3.62
Factors that influence my decision in choosing between traditional and conventional	0 (0.0%)	8 (4.6%)	39 (22.4%)	89 (51.1%)	38 (21.8%)	3.90

medicine. [Comfort and Individual Preferences] (F5)						
Factors that influence my decision in choosing between traditional and conventional medicine. [Personal Experience or Recommendation of Friends and Family] (F6)	3 (1.7%)	2 (1.1%)	35 (20.1%)	96 (55.2%)	38 (21.8%)	3.94
Factors that influence my decision in choosing between traditional and conventional medicine. [Availability and Cost] (F7)	0 (0.0%)	9 (5.2%)	29 (16.7%)	88 (50.6%)	48 (27.6%)	4.01
Factors that influence my decision in choosing between traditional and conventional medicine. [Consultation with Health Professionals] (F8)	1 (0.6%)	3 (1.7%)	33 (19.0%)	91 (52.3%)	46 (26.4%)	4.02
Social media influenced my choice between traditional and conventional medicine. (F9)	15 (8.6%)	26 (14.9%)	48 (27.6%)	52 (29.9%)	33 (19.0%)	3.36
The selection factor is because I believe in traditional medicine that is still widespread to this day. (F10)	5 (2.9%)	13 (7.5%)	73 (42.0%)	56 (32.2%)	27 (15.5%)	3.50
I choose traditional treatment or conventional treatment based on the content of	5 (2.9%)	5 (2.9%)	56 (32.2%)	66 (37.9%)	42 (24.1%)	3.78

natural based ingredients. (F11)					
I think that religious factors play a role in the acceptance or rejection of traditional or conventional medicine. (F12)	14 (8.0%)	18 (10.3%)	51 (29.3%)	52 (29.9%)	36 (20.7%)	3.47
Overall factors index (FI)						**3.79**
Valid N (listwise)	174					

* The scores ranged from "1" (strongly disagree) to "5" (strongly agree). A threshold score of 3.0 was employed, with mean indices above 3.0 representing positive agreement and those below 3.0 representing negative disagreement.

Factors of Society's Choice of Traditional Medicine or Conventional Medicine
Majority of respondents had chosen for positive agreement on the factor related items with factors index (FI) 3.79 (**Table 4.**). Factors that influence respondents decision in choosing between traditional and conventional medicine, mostly agreed they were affected by health conditions and types of diseases (97, 55.7%), effectiveness and scientific evidence (86, 49.4%), culture and personal values (90, 51.7%), comfort and individual preferences (89, 51.1%), personal experience or recommendation of friends and family (96, 55.2%), availability and cost (88, 50.6%), and consultation with health professionals (91, 52.3%). Noticeable also about an even number of neutral and agree responses that indicated society's choice between traditional or conventional medicine were influenced by social media and ingredients of traditional medicine. Majority of respondents neutrally thought that traditional medicine that is still widespread to this day (73, 42.0%). About an equal response for neutral and agree also was observed in **Table 4.**, in which respondents thought that religious factors play a role in the acceptance or rejection of traditional or conventional medicine.

Association between Gender, age Group, Education and job Category of Respondents and their Knowledge of Respondents on the use of Traditional Medicine and Conventional Medicine
A substantial one-way ANOVA value suggests that there are statistically significant variations among the means of three or more groups under comparison. This indicates that there is a statistically significant difference in at least one group mean compared to the others. All knowledge-related questions were assessed using one-way ANOVA and did not indicate a significant difference compared to selected demographic measures, except for the items listed in **Table 5**. **Table 5.** displays statistically significant variances in the means of gender and knowledge items K1 and K11, with p-values of 0.026 and 0.043, respectively. ANOVA revealed significant differences between age groups and knowledge-related items K4, K9, and K10 (0.008, 0.006, 0.006). Significant differences were seen between job category and knowledge-related item K3, as well as between education category and knowledge-related item K10, with p-values of 0.026 and 0.043, respectively.

Table 5

One-way ANOVA on the Knowledge of the use of Traditional Medicine and Conventional Medicine

ANOVA Table[a]			Sum of Squares	df	Mean Square	F	Sig.
Knowledge of the use of traditional medicine and conventional medicine							
K3 * JobCategory (Does expanding information about traditional or conventional medicine play a role in your treatment decisions?)	Between Groups	(Combined)	5.118	2	2.559	3.727	.026
	Within Groups		117.416	171	.687		
	Total		122.534	173			
K4 * Group (Exposure to various cultures influenced my perception of traditional and conventional medicine)	Between Groups	(Combined)	5.744	1	5.744	7.309	.008
	Within Groups		135.181	172	.786		
	Total		140.925	173			
K9 * Group (The social stigma against the use of traditional or conventional medicine in society in my view is [Stigma against mental illness])	Between Groups	(Combined)	9.623	1	9.623	7.619	.006
	Within Groups		217.233	172	1.263		
	Total		226.856	173			
K10 * Group (The social stigma against the use of traditional or conventional medicine in society in my view is [Believing that alternative medicine is ineffective])	Between Groups	(Combined)	10.281	1	10.281	7.627	.006
	Within Groups		231.834	172	1.348		
	Total		242.115	173			
K10 * EducationCategory (The social stigma against the use of traditional or conventional medicine in society in my view is [Believing that alternative medicine is ineffective])	Between Groups	(Combined)	15.876	3	5.292	3.977	.009
	Within Groups		226.239	170	1.331		
	Total		242.115	173			
K1 * Gender (I have used traditional medicine to treat my illness or health)	Between Groups	(Combined)	5.347	1	5.347	5.024	.026
	Within Groups		183.027	172	1.064		
	Total		188.374	173			
K11 * Gender (The social stigma against the use of traditional or conventional medicine in society in my view is [Influence of the media of the time])	Between Groups	(Combined)	4.897	1	4.897	4.160	.043
	Within Groups		202.460	172	1.177		
	Total		207.356	173			

Association between Gender, Age Group, Education and Job Category of Respondents and their Factors Society's Choice of Traditional Medicine or Conventional Medicine

One-way ANOVA was used to examine all factors-related items in comparison to selected demographic measures. The analysis did not show a significant difference, except for the items specified in **Table 6**. **Table 6.** displays statistically significant differences between gender and characteristics associated to item F2 and F10, with p-values of 0.043 and 0.024, respectively. Significant differences were seen across age groups and factors linked to items F2, F7, and F9, with p-values of 0.023, 0.046, and 0.016, respectively. There is a substantial difference in p-values between education category and factor F12, as well as between job category and factor F2, with p-values of 0.036 and 0.002, respectively.

Table 6

One-way ANOVA on Factors of Society's Choice of the Traditional Medicine or Conventional Medicine

ANOVA Table[a]			Sum of Squares	df	Mean Square	F	Sig.
Factors of society's choice of traditional medicine or conventional medicine							
F2 * Group (Factors that influence my decision in choosing between traditional and conventional medicine. [Health Conditions and Types of Diseases])	Between Groups	(Combined)	2.771	1	2.771	5.262	.023
	Within Groups		90.568	172	.527		
	Total		93.339	173			
F7 * Group (Factors that influence my decision in choosing between traditional and conventional medicine. [Availability and Cost])	Between Groups	(Combined)	2.596	1	2.596	4.044	.046
	Within Groups		110.398	172	.642		
	Total		112.994	173			
F9 * Group (Social media influenced my choice between traditional and conventional medicine)	Between Groups	(Combined)	8.296	1	8.296	5.955	.016
	Within Groups		239.612	172	1.393		
	Total		247.908	173			
F12 * EducationCategory (I think that religious factors play a role in the acceptance or rejection of traditional or conventional medicine)	Between Groups	(Combined)	11.686	3	3.895	2.921	.036
	Within Groups		222.735	167	1.334		
	Total		234.421	170			
F2 * JobCategory (Factors that influence my decision in choosing between traditional and conventional medicine. [Health Conditions and Types of Diseases])	Between Groups	(Combined)	6.683	2	3.341	6.594	.002
	Within Groups		86.656	171	.507		
	Total		93.339	173			
F2 * Gender (Factors that influence my decision in choosing between traditional and conventional medicine. [Health Conditions and Types of Diseases])	Between Groups	(Combined)	2.207	1	2.207	4.166	.043
	Within Groups		91.132	172	.530		
	Total		93.339	173			
F10 * Gender (The selection factor is because I believe in traditional medicine that is still widespread to this day)	Between Groups	(Combined)	4.511	1	4.511	5.208	.024
	Within Groups		148.989	172	.866		
	Total		153.500	173			

Association between Gender, Age Group, Education and Job Category of Respondents and Selected Knowledge/Factors Related Item of Traditional Medicine or Conventional Medicine

The mean scores were determined for all knowledge and factors connected to the question that showed significant differences with at least one of the selected demographic indicators. Pearson's Chi-square and cross-tabulation analyses were conducted to determine any relationship between specific demographic characteristics and the selected knowledge/factors related item. The study analyzed how gender, age group, education, and job type influence society's preference for traditional or mainstream medicine (**Table 7.**). The analysis revealed a significant correlation ($p \le 0.05$) between respondents' age group and their mean score for factors influencing society's preference for traditional or conventional medicine, unlike gender, education, and job category. All selected demographic indicators (gender, age group, education, job category) had no association with mean score from selected knowledge related items ($p > 0.05$).

Table 7.

Cross tabulation between selected knowledge and factors-items with selected demographic of respondents

Item	**Pearson Chi-Square, Asymp. Sig. (2-sided)**			
	Gender	**Age Group**	**Education Level**	**Job Category**
Mean Score Selected Factors	0.157	0.019	0.188	0.419
Mean Score Selected Knowledge	0.306	0.203	0.598	0.485

Respondents' Preferred Sources for Information on Traditional or Conventional Treatment Techniques

69.5% of the respondents received information about traditional or conventional treatment procedures from their family (**Figure 1.**). Approximately 54.6% of participants acquire information from social media platforms including Facebook, Instagram, and TikTok. 42.0% of respondents learned from friends, whereas 40.8% learned from website searches. Approximately 35.1% of respondents are informed by doctors or physicians. Approximately the same number of respondents are aware of information from articles or journals (29.9%) and magazines or newspapers (27.0%). 14.4% of the respondents obtained information from teachers or lecturers, while 2 respondents did not respond.
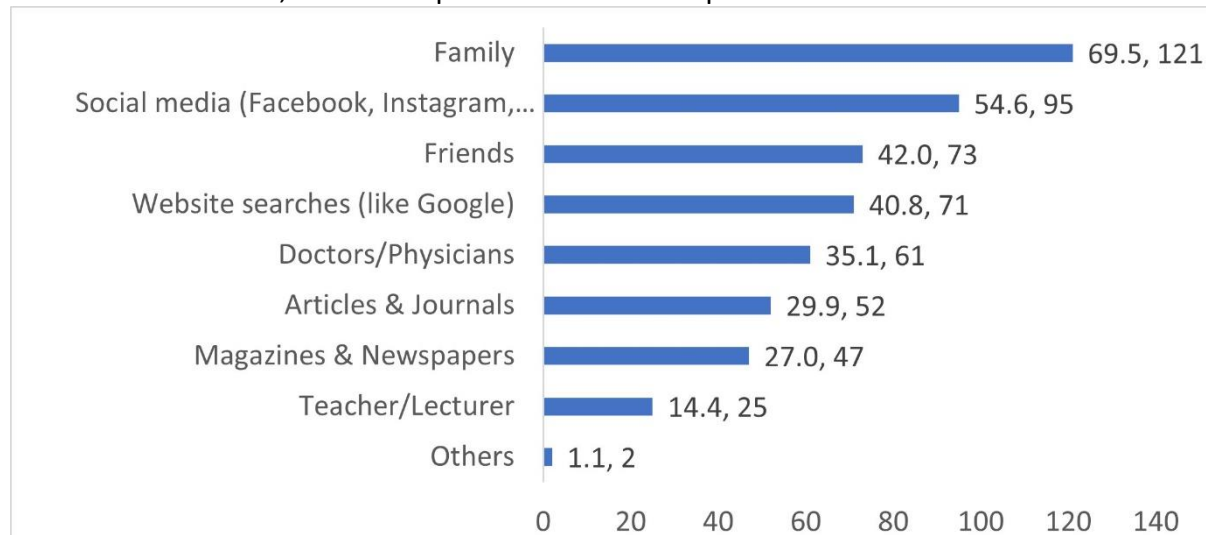

Figure 1. Knowledge related item, how do respondents get information about traditional or conventional treatment methods? (K5)*
*Multiple responses were allowed, frequency (n=174), Labelling indicate percentage, frequency

Response towards Exposure to Various Culture on Perception of Traditional and Conventional Medicine

Table 8. shows that 73.6% of respondents think that being a part of a multicultural community could help them better comprehend other people's perspectives, beliefs, and methods of health and medicine. More than half from the respondents (54%) think that medical professionals may benefit from a more accepting environment if they lived in a multiethnic community. Half of respondents also think being a part of a multicultural community helps foster an understanding of diverse populations' needs and values. The importance of considering the whole person—body, mind, and spirit—in multicultural settings is emphasized by 34.5 percent of respondents. About 51.7% of respondents thinks that exposing oneself to different cultures might help one overcome biases and misconceptions, especially when it comes to a given culture's traditional or conventional medical practices. Only one respondent who did not response to any option given.

Table 8

*Factors Related item on Exposure to Various Cultures Influenced Respondents' Perception of Traditional and Conventional Medicine**

Perception indicator about traditional and conventional medicine	Frequency (n=174)	Valid Percentage
Understand that there are diverse views, values, and practices related to health and medicine	128	73.6 %
Increase acceptance of diversity in the field of medicine	94	54.0 %
Help in developing sensitivity to the demands and beliefs of different communities	87	50.0 %
Emphasize holistic thinking, which includes the relationship between body, mind, and spirit	60	34.5 %
Help overcome stereotypes and prejudices that may arise against traditional or conventional medicine from a certain culture	90	51.7 %
Others	1	0.6 %

*Multiple responses were allowed

The utilization of conventional and traditional medicine is a topic of interest and importance, as indicated by the provided sources. The general population commonly utilizes traditional, complementary, and alternative medicine (TCAM), with reported prevalence rates ranging from 24% to 71.3% globally[16]. TCAM encompasses a diverse range of health techniques and products, such as herbal medicines, acupuncture, chiropractic, and other modalities. These practices are frequently employed in conjunction with or as alternatives to standard medical approaches. The usage of conventional and traditional medicine in Malaysia has attracted considerable interest and has been the focus of extensive investigation. In the last twenty years, Malaysia has made significant endeavors to include TCAM into its national healthcare system. The country has prioritized the regulation of the safety and quality of traditional and complementary medicine TCAM through specific legislation, resulting in the establishment of formalized TCAM practices. Malaysia has effectively integrated TCAM into its healthcare system using a systematic method. This has led to TCAM being widely used as a social resource to offer healthcare for all[2].

Traditional medicine has made significant contributions to contemporary medicine throughout history. For instance, the Madagascar periwinkle has yielded medications for children cancer, while willow bark has served as the foundation for aspirin[17]. The field of modern medicine has been greatly shaped by the impact of nature and traditional knowledge. Approximately 40% of pharmaceutical drugs currently available are derived from traditional sources. A study conducted in Malaysia has revealed a significant prevalence of TCAM usage among the public. This is especially prominent in the utilization of herbal remedies for both addressing health problems and promoting well-being. Malaysians frequently utilize biological-based remedies, such as herbal medicines, as a primary means of healthcare, demonstrating a substantial dependence on traditional and supplementary medicine[3]. In addition, the education in traditional and complementary medicine in Malaysia adheres to established systems, with 11 institutions authorized to provide TCAM education. Collaborative clinical training programs, frequently held in conjunction with institutions in China, Taiwan, and Australia, are essential for acquiring hands-on experience in traditional

medicine following graduation. Malaysia's approach to TCAM education demonstrates a methodical endeavor to improve education and training in this domain[1].

This study is an effort to uncover the knowledge and factors that have been suggested as having the potential to be responsible for the utilization of traditional types of treatments. With an average total index (KI) above 3.5, most respondents among Malaysia citizens agree that their knowledge and factors regarding the utilization of traditional and conventional medicines are in a positive agreement. Approximately 50% of the American population has experimented with various types of alternative medicine, including herbal treatments, acupuncture, and chiropractic treatment[18]. Engaging in preventative health care practices is associated with the use of alternative medicine. The current study revealed a noteworthy distinction (p-value ≤0.05) between the youth and non-youth groups in terms of culture, stigma towards mental illness, and belief in the inefficacy of traditional treatment. These factors likely impacted their perception of traditional medicine. Older persons are less likely to seek alternative medicine instead of conventional care compared to younger age groups[18]. The decision-making process of younger individuals in Malaysia is influenced by various factors, such as health issues and specific diseases, accessibility and affordability, and the potential impact of social media on their preference for traditional medicine.

Research also shows a positive link between the utilization of conventional medicine and complementary and alternative medicine (CAM), indicating that those who use CAM often incorporate these therapies with traditional therapy rather than fully substituting it[19]. A significant number of people with cardiovascular disease or risk factors frequently use complementary medicine[20]. Nevertheless, according to the current research, there was a limited demand for health professionals, such as doctors, nurses, and pharmacists, to provide information about herbal medicine. This phenomenon may be ascribed to the inadequate guidance and lack of acquaintance with herbal medicine in our medical educational establishments. The main sources for acquiring information on traditional treatments are familial networks, social media platforms, and personal friends. After performing a Google search, it is recommended to consult healthcare specialists for information. The challenge of incorporating herbal medicine into our health-care system may be partly due to the health professionals' lack of excitement and apathetic attitude towards this therapeutic approach[20]. Traditional, complementary, and alternative medicine significantly influence healthcare globally, since numerous individuals incorporate these methods alongside traditional treatment to address their complete health in a comprehensive manner.

Understanding the healthcare environment in Malaysia relies heavily on the perception of health professionals regarding the merger of conventional and traditional medicine. A qualitative study was undertaken in five selected hospitals in Malaysia to evaluate the perspectives of health professionals regarding their perception of TCAM[21]. All participants in this study personally used various types of TCAM and generally recommended TCAM for treatment. The majority concurred with the assertion that TCAM enjoys popularity among the populace. Additionally, they believed that individuals place their trust in TCAM and harbor apprehensions about Conventional Medicine (CM). The entire medical personnel held the belief that TCAM have therapeutic efficacy. The overwhelming majority of respondents concurred with the proposition of integrating TCAM with CM. Furthermore, a significant majority also expressed support for including TCAM into the training of future healthcare

professionals. Studies reveal that community pharmacists in Kedah, Malaysia possess a good knowledge on herbal medicines and play a vital role in delivering optimal treatment and guidance to patients who utilize these products[22]. Pharmacists have the duty of ensuring the sensible utilization of herbal medications and must possess knowledge regarding possible interactions between herbal and allopathic drugs, negative reactions, and situations where specific medical conditions make the use of herbal medicines inadvisable. If the survey can accurately represent the entire pharmacist population in Malaysia, it could serve as a reliable indicator that Malaysia is prepared to progress in the integration of traditional medicine and conventional approaches within its healthcare system. However, they may experience a sense of inadequacy when it comes to providing counselling to patients regarding their usage.

Herbal medicine is widely used in Malaysia, however it carries inherent hazards. Quality control issues, adverse drug reactions (ADRs), and misconceptions regarding safety are potential dangers linked with the use of herbal medicine in Malaysia[22]. Herbal remedies are occasionally utilized based on traditional beliefs and practices rather than scientific facts. The dependence on traditional knowledge without adequate scientific validation can present dangers, as the established safety and effectiveness of particular herbal medicines may be lacking[23]. Healthcare practitioners and users must have a thorough understanding of the potential hazards linked to these medicines. These hazards include concerns about quality control, negative reactions to drugs, misunderstandings about safety, and the significance of relying on evidence-based procedures when using herbal medicine. Healthcare practitioners and users must have a thorough understanding of the potential hazards linked to these medicines.

While the findings of this study provide valuable insights that could contribute to the development of policies regarding integrative medicine in the country, it is important to exercise caution when interpreting the results due to the study's narrow focus on a certain subset of the population. Hence, it is challenging to extrapolate this finding to the total populace of the nation as the participants were not selected from state across. This is informative since the knowledge and factor of herbal medicine might differ significantly throughout the extensive, ethnically and culturally diverse areas of Malaysia.

Conclusion
The findings of this study indicate that most of the participants possess prior knowledge about herbal medicine and hold a generally favourable disposition towards its utilization. Significant findings have been discovered regarding the factors that influence the choice between traditional and conventional medicine among both younger and older respondents. Factors such as health conditions, disease types, availability, pricing, and social media have exerted influence. The primary sources of knowledge about herbal medicine included social media, search engine, as well as advice from friends, peers, and family. Health professionals such as doctors, nurses, and pharmacists were not widely seen as reliable sources of knowledge about herbal medicine. However, a significant majority of respondents expressed a desire for doctors to recommend herbal medicine and for its integration into hospital settings.

The study provides insights into the relationship between knowledge, attitudes, and behaviour (KAB) regarding traditional medicine, validating and potentially expanding the KAB model in a new, culturally specific domain. By emphasizing the gaps in acceptance and the

potential for integration, the study serves as a springboard for further research into the efficacy, safety, and standardization of traditional medicine within a regulated healthcare framework. The study adds empirical data on the Malaysian population's perceptions of traditional medicine, addressing a relatively underexplored area in healthcare research.

Conflict of Interest
The authors declare that there is no conflict of interests regarding the publication of this manuscript.

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