

ACCEPTANCE AND KNOWLEDGE OF TRADITIONAL
CHINESE MEDICINE AND TRADITIONAL INDIAN
MEDICINE AMONG MEDICAL DOCTORS IN MALAYSIA
FOR MANAGING PATIENTS' MENOPAUSAL
SYMPTOMS

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FEBRUARY 2026

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**ACCEPTANCE AND KNOWLEDGE OF TRADITIONAL CHINESE
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MENOPAUSAL SYMPTOMS**

By

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A thesis submitted to Faculty of Business and Finance,
Universiti Tunku Abdul Rahman,
in partial fulfillment of the requirements for the degree of Master of
Philosophy in February 2026

ABSTRACTS

ACCEPTANCE AND KNOWLEDGE OF TRADITIONAL CHINESE MEDICINE AND TRADITIONAL INDIAN MEDICINE AMONG MEDICAL DOCTORS IN MALAYSIA FOR MANAGING PATIENTS’ MENOPAUSAL SYMPTOMS

Goh Sook Yan

Menopause is the permanent cessation of menstruation and often accompanied by several symptoms that impact women's quality of life. Menopausal Hormone Therapy (MHT)/ Hormone Replacement Therapy (HRT) carries risks including stroke and cancer, prompting interest in safer alternatives. Traditional and Complementary Medicine (T&CM) such as Traditional Chinese Medicine (TCM) and Traditional Indian Medicine (TIM), which well-established in countries like China, India, and Japan. In Malaysia, the adoption of T&CM remains limited, due to the low engagement among medical doctors. Therefore, this study aimed to explore the Malaysian medical doctors’ knowledge and acceptance of TCM and TIM for menopausal symptoms management.

A qualitative phenomenological approach was applied, involving one-on-one online interviews with 25 medical doctors. Participants were selected purposively until data saturation was reached. The study consisted of three phases: (1) Pre-intervention interviews, (2) an educational intervention seminar by certified TCM and TIM experts, to provide knowledge of TCM and TIM in menopause management, (3) post-intervention interviews. Transcripts were analysed using hybrid thematic analysis via Atlas.ti.

Pre-intervention, participants had superficial knowledge of TCM and TIM, relying on informal sources such as family or social media. Scepticism was common around herbal safety and herb-drug interactions. Most were open to TCM and TIM in principle but unwilling to recommend, held back by insufficient knowledge. Without referral pathways or institutional support, structural gaps reinforced reluctance. Post-intervention, knowledge shifted from hearsay to clinical menopausal symptoms management. Perceptions moved from scepticism toward viewing TCM and TIM as complementary, particularly for patients contraindicated for HRT. Willingness to recommend grew, tied to evidence and patient autonomy but structural barriers persisted.

In conclusion, doctors were not against TCM and TIM; they simply did not know enough. This shows that educational seminar can enhance medical doctors' knowledge, perceptions, confidence, and acceptance of TCM and TIM for menopause management. Future research can use quantitative methods to examine how educational interventions influence clinical behaviours.

Keywords: Knowledge, Acceptance, Traditional Chinese Medicine, Traditional Indian Medicine, Menopausal Symptoms, Medical Doctors, Malaysia

Subject Area: RA418-418.5 Medicine and society, R735-847 Medical education

ACKNOWLEDGEMENT

First and foremost, I would like to express my deepest and most sincere gratitude to my main supervisor, Dr. Hemaniswarri Dewi A/P Dewadas, for her invaluable guidance, continuous encouragement, patience, and constructive feedback throughout the course of this research. Her insightful advice, academic expertise, and unwavering support have been instrumental in the successful completion of this dissertation.

I am equally grateful to my co-supervisor, Dr. Gengeswari A/P Krishnapillai, for her thoughtful suggestions, professional guidance, and consistent support. Her expertise and encouragement have significantly enriched the quality of this study. I would also like to extend my sincere appreciation to my second co-supervisor, Prof. Ts. Dr. Lim Yang Mooi, for the encouragement provided during the preparation of this dissertation. Her insights and academic perspective have greatly strengthened this research.

My heartfelt thanks go to the faculty members and administrative staff of Universiti Tunku Abdul Rahman for their assistance and support throughout my Master of Philosophy journey. I would also like to express my sincere gratitude to the Institute of Postgraduate Studies and Research (IPSR), UTAR, for the guidance and support provided throughout the thesis submission process. I am also grateful to UTAR Research Support Scheme (RSS) for the monthly stipend that provided financial support and enabled me to focus on the completion of this research.

I would like to express my sincere appreciation to all 25 medical doctors in Malaysia who generously participated in the main study, as well as the 10 medical professionals who participated in the preliminary study. Their willingness to share their knowledge, experiences, and perspectives on Traditional Chinese Medicine (TCM) and Traditional Indian Medicine (TIM) in managing patients' menopausal symptoms made this research possible.

Finally, I am deeply grateful to my family and friends for their unwavering love, patience, understanding, and moral support. Their encouragement has been my greatest source of strength throughout this academic journey.

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LIST OF ABBREVIATIONS

Below shown are the list of abbreviations that have been used:

HRT	Hormonal Replacement Therapy
MHT	Menopausal Hormone Therapy
MOH	Ministry of Health
T&CM	Traditional and Complementary Medicine
TCM	Traditional Chinese Medicine
TFA	Theoretical Framework of Acceptability
TIM	Traditional Indian Medicine
WHO	World Health Organization

CHAPTER 1

INTRODUCTION

1.1 Research Background

According to the World Health Organization (WHO), menopause marks the end of a woman's reproductive years, typically occurring naturally between ages 45 and 58 due to the loss of ovarian follicular function and a decline in oestrogen levels, though it can also be induced by surgeries or medical interventions affecting ovarian function (Kojima et al., 2022; Organization, 2024). The most common ways to become menopausal are through natural menopause and premature menopause (e.g., premature ovarian insufficiency and surgical menopause). Natural menopause is defined as the absence of menstruation over 12 months in which it is not caused by medical treatment or surgery. During this transition, the levels of hormones (oestrogen and progesterone) will decline because they are no longer necessary to support reproduction (Cho et al., 2019). Women may suffer various menopausal symptoms no matter in natural menopause or premature menopause, due to the hormonal changes in the body. Menopause could be classified into three phases: perimenopause, menopause and post-menopause where the symptoms experienced during these phases can differ significantly from woman to woman (Deecher & Dorries, 2007). Perimenopause refers to the transitional phase that begins when the endocrinological, biological, and clinical changes associated with menopause first emerge and extends to one year following the last menstrual period. During

this phase, women may experience a range of symptoms including irregular menstrual cycles, abdominal bloating, headaches, mood fluctuations, anxiety, depressive symptoms, cognitive difficulties, dry skin, hair loss, vasomotor disturbances, and a decline in sexual function (*CPG: Management Of MENOPAUSE in Malaysia*, 2022). Studies have shown that the prevalence and severity of menopausal symptoms vary across ethnic groups, cultural backgrounds, and geographic regions (Zhang et al., 2021). This is in accordance with a study reported in India where the top three symptoms among majority of women were anxiety (80%), physical and mental exhaustion (71.5%), and sleep problems (61.2%), whereas others included irritability (60.7%), joint and muscular discomfort (56%), heart problems (54%), and hot flushes (36.7%) (Kalhan et al., 2020). In contrast, a study in China revealed that the top three prevalence symptoms are urogenital symptoms was the highest (98.27%), fatigue (69.55%) and hypomnesia (68.08%) for both perimenopause and postmenopausal women, with hypomnesia being more prevalent in postmenopausal (70.7%) compared to perimenopausal women (65.6%) (Zhang et al., 2021).

According to the findings of Panay et al. (2021), there were 70% of European women and 80% of Australian women were menopausal; among these women, 90% of Europeans and 97% of Australians reported physical symptoms such as hot flushes were the most commonly experienced symptoms, while 55% of Europeans and 63% of Australians experienced psychological symptoms, but only 8% of European women reported no menopausal symptoms. Among the menopausal symptoms, vasomotor symptoms (VMS), including hot flashes and

night sweats are considered the hallmark and bothersome symptoms of the menopause transition where there is over 80% of women experience VMS (Deecher & Dorries, 2007; Nappi et al., 2023). However, in Malaysia, Manoharan et al. (2023) found that the most frequent symptoms reported by women were joint pains (42.8%), menstrual changes (39.5%), and hot flashes (29.5%) where these findings align with those of Ishak et al. (2021), who discovered that the most prevalent physical symptoms among women included musculoskeletal problems, such as joint pain, bone-related pain, and body aches, followed by vasomotor symptoms, particularly hot flushes, and fatigue. Recent studies emphasize how menopausal symptoms can adversely affect women's ability to work, efficiency, productivity and career development which causes women to either be absent from work, quit their jobs, or change jobs (Faubion et al., 2023; O'Neill et al., 2023; Verdonk et al., 2022).

Menopausal Hormone Therapy (MHT) or Hormonal Replacement Therapy (HRT) is currently one of the most effective treatments recommended by modern medical doctors for menopausal insomnia, VMS, and depression (Silvestri et al., 2019). However, several studies have reported that there are risks of taking MHT including increased risk of stroke (Johansson et al., 2022; Lobo, 2017), breast cancer (Lobo, 2017), endometrial cancer (Tempfer et al., 2020) and ovarian cancer (Lobo, 2017). Various non-hormonal pharmacologic treatments exist for vasomotor symptoms (VMS), including selective serotonin reuptake inhibitors (SSRIs), serotonin norepinephrine reuptake inhibitors (SNRIs), gabapentin, clonidine, oxybutynin, and neurokinin B antagonists where there are potential side effects include nausea, dizziness, and fatigue

(Madsen et al., 2023). In addition, according to Wu et al. (2020) found that the antidepressants including SSRIs and SNRIs were effective for women with depression on menopause, but may cause of discontinuation due to its adverse effects. Worried about the adverse effects of conventional treatment, women are increasingly turning to Traditional and Complementary Medicine (T&CM), such as Traditional Chinese Medicine (TCM) and Traditional Indian Medicine (TIM), to help manage or relieve their menopausal symptoms (Kang et al., 2002; Kronenberg & Fugh-Berman, 2002; Mohiuddin et al., 2021; Moore et al., 2017). The effectiveness, accessibility, and affordability (Othman & Farooqui, 2015; Shou et al., 2011) of T&CM making T&CM a preferred choice for managing menopausal symptoms.

Malaysia is a multiracial and multicultural country with various T&CM practices, including Traditional Chinese Medicine (TCM) and Traditional Indian Medicine (TIM). TCM originating from China, is widely used to manage menopausal symptoms (Chiu et al., 2015; Z. Li et al., 2023; Taylor-Swanson et al., 2015; Zhang et al., 2020). Acupuncture reduces hot flashes (Borud & White, 2010; Chiu et al., 2015), while Chinese herbal medicine (CHM) and moxibustion address sleep difficulties, mood, joint pain, and fatigue (Mehrnoush et al., 2021; Shao et al., 2009; Taylor-Swanson et al., 2015; Xing et al., 2023). TIM, especially Ayurveda, also manages menopausal symptoms (Panda et al., 2018; Steels et al., 2018) with herbs like soy isoflavones, red clover, black cohosh (Mohammad-Alizadeh-Charandabi et al., 2013; Mohapatra et al., 2022), and practices like Yoga (Cramer et al., 2018; Patangia et al., 2022), which significantly improve the vasomotor symptoms, fatigue, and depression

caused by menopause.

Many countries have fully integrated the use of T&CM into the conventional healthcare systems such as South Korea, China and Japan are the examples of countries that have fully integrated T&CM into their National Healthcare System (NHS) (World Health Organization, 2013). In addition, according to “WHO traditional medicine strategy: 2014-2023”, over 100 million Europeans have tried T&CM products and healthcare services, with one-fifth reported as regular users; in China, according to the national survey data, 907 million people visiting to TCM practitioners; additionally, in India, there were estimated one million village-based, traditional Indian community health workers (World Health Organization, 2013). TCM was used and promoted in different countries like Japan, South Korea, and Vietnam; in Japan, the traditional medicine is called Kampo which is one of the Chinese Herbal Medicines (Cheung, 2011). On the other hand, for TIM as Yoga is a widely popular physical and spiritual activity in Turkey, Thailand, Nepal (Özhalbant & Alvarez, 2020). For example, Kampo, the most popular traditional medicine in Japan, includes three major formulas: Kamishoyosan, which improves sleep quality; Keishibukuryogan, which lowers blood pressure; and Tokishakuyakusan, which alleviates headaches and depression (Terauchi & Kubota, 2016). Korean medical treatments, including herbal medicines, acupuncture, pharmacopuncture, moxibustion, and chuna, may effectively manage menopausal vasomotor symptoms such as hot flashes and sleep disorders (Park et al., 2022).

Though T&CM treatments have co-existed among Malaysians for several years, the utilisation of T&CM in Malaysia remains comparatively minimal. According to the National Health and Morbidity Survey 2015, 29.25% of the population utilized T&CM practices or consulted with T&CM practitioners (Institute for Public Health, 2015). In 2020, 21.51% of the population indicated that they either practiced traditional medicine or consulted traditional healers for various illnesses. This equates to approximately 9 million out of the estimated 30 million people in Malaysia using T&CM primarily to maintain wellness and complement the mainstream healthcare system; however, the preference for T&CM in the treatment of diseases among Malaysians remains relatively low (Goh, 2021).

1.2 Research Problem

The following sections elaborate on the research problem of this study in detail.

1.2.1 TCM & TIM Practices in Malaysia

Despite the demonstrated efficacy of T&CM treatments, their underutilization in Malaysia especially the integration of T&CM treatment into the mainstream healthcare system in Malaysia is still in its infancy (Kaur et al., 2019) led to many menopausal women may not be accessing potentially beneficial treatment options. This underutilization can lead to prolonged suffering and decreased quality of life for menopausal women. Previous studies have shown the use of

T&CM among Malaysian women. For example, Ohn Mar et al. (2015) reported that there are 41.2% of the Ipoh residents used complementary medicine for relieving menopausal symptoms; and among them, Chinese (58.3%) and Indians (51.8%) was significantly more than the Malays (21.8%). In contrast, a more recent study by Lau et al. (2025) conducted in Kuala Lumpur, Malaysia found that only 27.2% of respondents utilized T&CM during menopause, with Indian women showing higher prevalence than Chinese and Malays which showed a significant dropped of the use of T&CM compared to the study conducted by Ohn Mar et al. (2015) in Ipoh city (41.4%) this may due to people might prefer conventional medicine or limited awareness of available T&CM options.

Although T&CM services are accessible in 16 government hospitals, the majority are provided by private institutions or T&CM centres (Traditional and Complementary Medicine Division, 2024). This limited public availability restricts access for many women, particularly those who may not afford private institutions. In addition, with a total of 146 government hospitals in Malaysia, only 16 government hospitals offer T&CM services, and these are only available in some cities and states in Malaysia. Ministry of Health (MOH) statistics indicate that the number of patients utilising T&CM services in MOH hospitals experienced fluctuations between 2018 and 2023. After a peak in 2019, patient numbers declined sharply in 2020 and 2021, coinciding with the COVID-19 pandemic and the temporary suspension of certain TIM services such as Varmam therapy (since July 2021) and Shirodhara and External Basti Therapy (since October 2021) as due to the expiry of the deputation period of

practitioners from the Government of India. Despite these disruptions, patient utilization began to recover, increasing from 43,128 cases in 2022 to 52,366 cases in 2023.

However, when the data are analyzed by type of service including Traditional Massage, Acupuncture, and Herbal Therapy, the number of patients in 2023 remains lower compared to 2018. For instance, the number of patients receiving Traditional Massage decreased from 17,580 in 2018 to 16,304 in 2023, Acupuncture from 32,908 to 33,208 (showing only a slight recovery after the pandemic), and Herbal Therapy from 7,510 to 2,918 (Traditional and Complementary Medicine Division, 2023). This suggests that while total patient numbers have begun to recover, individual T&CM modalities have not yet returned to pre-pandemic utilization levels.

The underutilization of T&CM services may be due to several factors including the T&CM is not fully integrated into the national healthcare system (Traditional and Complementary Medicine Division, 2021), limited formal education and training opportunities exist for medical doctors (Traditional and Complementary Medicine Division, 2017), lack of knowledge and acceptance among medical doctors towards T&CM which prevents them from recommending these treatments to patients.

1.2.2 TCM & TIM Knowledge of Medical Doctors in Malaysia

The knowledge of medical doctors regarding T&CM including TCM and TIM is often limited. For example, many medical doctors view T&CM therapies as not part of legitimate medical practice which is outside of their role (Gall et al., 2019; Roy et al., 2015). Thus, this lack of knowledge and uncertainty about the role of T&CM in managing menopausal symptoms prevent them from recommending patients on the benefits, limitations, and potential risks associated with these treatments (Gall et al., 2019). The deficiency of workshops, and training programmes (Jafari et al., 2021) in TCM and TIM modalities such as acupuncture, and herbal medicine can result in a lack of confidence of medical doctors in recommending TCM and TIM modalities for managing menopausal symptoms in women.

Medical doctors with knowledge of TCM and TIM can significantly influence menopausal women's decision-making regarding these treatment options. Given that people generally are more confident and trust in medical doctors (Kelak et al., 2018), the knowledge and acceptance of medical doctors towards T&CM treatments on menopausal symptoms can encourage menopausal women to consider these treatment options.

1.2.3 TCM & TIM Acceptance by Medical Doctors in Malaysia

People are more likely to trust and act on suggestions from medical doctors. According to Ong et al. (2024) revealed that 52.1% of people would opt to consult a medical doctor first when sick, and 23.3% of people would purchase

medications directly from a retail pharmacy. However, when it comes to people who recommended the use of T&CM, family, relatives, or friends are the major group with 85.4% while medical doctors (8.9%) and pharmacist (8.4%) were among the least group of people who recommended the use of T&CM. Although T&CM is becoming widely accepted in Malaysia, the attitudes and perceptions of medical doctors towards T&CM play a crucial role in shaping menopausal women's treatment options. Medical doctors serve as gatekeepers within the formal healthcare system, and their acceptance or reluctance directly influences the safe integration of TCM and TIM into patient care. Past studies reported a significant variation in the medical professionals' beliefs and practices towards T&CM (Gall et al., 2019; Mehta et al., 2016; W. Peng et al., 2014; Roy et al., 2015).

The lack of knowledge among medical doctors towards T&CM may have negative attitudes, inherent biases or preferences for conventional Western medical approaches, which influence their acceptance of TCM and TIM treatment on menopausal symptoms (Tozun et al., 2022). This scepticism among medical doctors towards T&CM is due to a lack of evidence and research data related to T&CM practices which hinders the ability of medical doctors to provide information on the nature, efficacy, risk, and benefits of T&CM (Clement et al., 2005; Gall et al., 2019; World Health Organization, 2013). Consequently, medical doctors may be reluctant to recommend TCM and TIM treatments due to the lack of confidence and acceptance of the latest information related to these modalities for managing menopausal symptoms.

However, this gap in knowledge and lack of awareness (e.g., efficacy, quality and safety level) of medical doctors may result in limited treatment options, decreased patient satisfaction, and missed opportunities for integrated healthcare approaches (W. Peng et al., 2014). Patients are unaware T&CM modalities in managing menopausal symptoms lead to poor quality of life, families, and relationships (Utian, 2005), low work performance including productivity, presenteeism, and absenteeism (Hashimoto et al., 2021; Schoep et al., 2019). Therefore, enhancing the knowledge and acceptance of T&CM among medical doctors is crucial, not only because people are trusted medical doctors, but also because their treatments choices are essential for ensuring safe, evidence-based integration of TCM and TIM into patient care. While nurses, pharmacists, and dietitians also engage with patients, their roles are often supportive or advisory, whereas medical doctors are pivotal in determining patient care and act as crucial decision-makers in diagnosis and treatment planning (Kelak et al., 2018). For this reason, this study focuses specifically on medical doctors' acceptance.

1.2.4 Research Gap

A previous study by Abuduli et al. (2016) aimed at assessing the opinion of medical professionals (doctors, pharmacists, and nurses) including their perception, usage and recommendation of T&CM, knowledge of T&CM, integration of both T&CM and conventional treatment and opinion on medical training in T&CM. However, this study focuses more specifically on

investigating the acceptance and knowledge of TCM and TIM treatment on menopausal symptoms, which can lead to the exploration of acceptance among medical doctors towards TCM and TIM. Similarly, a previous study by Ong et al. (2024) assessed the knowledge, attitudes, and practices towards T&CM where the target respondents are general public in Malaysia which is different from this study which targets medical doctors as key decision-makers in healthcare practice.

In contrast, the method applied in this study is different from the previous studies that applied quantitative approaches such as questionnaires, and surveys to investigate the knowledge and attitudes of medical professionals (AlBedah & Khalil, 2012; Kong et al., 2013; Manoharan et al., 2023). This study will employ in-depth qualitative research by conducting one-on-one online interviews among medical doctors which enable the exploration of the knowledge and acceptance of medical doctors towards TCM and TIM treatments on menopausal symptoms. This design allows to explore and better understanding of doctors' personal experiences, reasoning, and contextual influences that shape their acceptance of TCM and TIM (Renjith et al., 2021). A qualitative method provides flexibility to explore not only what doctors know or believe, but why and how these perspectives develop within their clinical, cultural, and institutional environments.

Previous research has concentrated on women's knowledge about the menopause transition (Larroy & Fernandez Arias, 2020; Munn et al., 2022; Refaei et al., 2022), the impact of their symptoms (Faubion et al., 2023; O'Neill

et al., 2023; Safwan et al., 2024; Verdonk et al., 2022), their attitudes on menopause whether they seek healthcare advice (L. Du et al., 2020; Harper et al., 2022; Nappi et al., 2023), and the prevalence of women utilizing T&CM treatments for menopausal symptoms (Ali Mohamed et al., 2022; Lau et al., 2025; Wang & Yu, 2021; Zhou et al., 2023). This study, however, focuses on the TCM and TIM which are more specific T&CM treatments for medical doctors to enhance their knowledge by providing a comprehensive knowledge of TCM and TIM treatments on managing menopausal symptoms, thus broadening their therapeutic options and knowledge base.

1.3 Research Questions

This research study aims to explore several key questions regarding the knowledge and acceptance of Traditional Chinese Medicine (TCM) and Traditional Indian Medicine (TIM) among medical doctors in Malaysia for managing menopausal symptoms.

- i) What is the medical doctors' knowledge and acceptance of TCM and TIM in managing patients' menopausal symptoms before the intervention?
- ii) What is the medical doctors' knowledge and acceptance of TCM and TIM in managing patients' menopausal symptoms after the intervention?

1.4 Research Objectives

The objectives of this research study are:

- i) To explore the Malaysian medical doctors' knowledge and acceptance of TCM and TIM in managing their patients' menopausal symptoms before the intervention.
- ii) To explore the Malaysian medical doctors' knowledge and acceptance of TCM and TIM in managing their patients' menopausal symptoms after the intervention.

1.5 Scope of Study

In this study, Traditional Chinese Medicine (TCM) and Traditional Indian Medicine (TIM) were the main focus as the TCM and TIM are among the most widely practised and recognized traditional medicine systems globally. Traditional Malay Medicine (TMM) is an important part of Malaysia's cultural heritage and T&CM practices, its exclusion from this study is due to TMM may lack of substantial scientific evidence and research studies (Goh, 2021) that demonstrate its effectiveness in managing menopausal symptoms. In addition,

the majority of TMM practitioners did not undergo formal education in TMM whereby the knowledge and practice of TMM are learned from their ancestors or masters (who are also traditional healers themselves) (Goh, 2021). This limitation in available research makes it challenging to include TMM in this current study. Besides, various T&CM practices existed in Malaysia, however, T&CM practices such as homeopathy, naturopathy or aromatherapy are also excluded in this study due to limited scientific backing in the context of managing menopausal symptoms. Additionally, by limiting the scope on TCM and TIM makes the research more focused and detailed analysis whereby TCM and TIM have been integrated into healthcare systems in various countries (China, India, Japan, South Korea), providing numerous clinical studies of how these practices are utilised alongside conventional medicine.

A phenomenological qualitative research method was employed in this study by conducting one-on-one online interviews with medical doctors (i.e. internal medicine, family medicine, O&G). This approach allows for a comprehensive exploration of their experiences, perspectives, and insights regarding healthcare practices and patient care. The interviews were structured and guided using the knowledge constructs developed by 3 knowledge constructs from Philippe and Ngobo (1999) and the 7 components of Theoretical Framework of Acceptability (TFA). These frameworks will serve as a topic guide to develop the research instrument, ensuring that the interview questions are relevant, comprehensive, and aligned with the study's objectives.

The medical doctors were involved in this study as target participants due to in

Malaysia, doctors are considered frontliners and primary medical professionals who play central roles in patient care, diagnosis, treatment, and medication management (Ang et al., 2021). Primary care serves as the initial point of contact for patients within the healthcare system and can be provided by both public and private providers (Ong et al., 2022). Their direct involvement with patients and decision-making processes makes their perspectives and practices crucial to understanding healthcare delivery.

The interventional seminar by TCM and TIM experts was conducted to explore the knowledge and acceptance of medical doctors in managing menopausal symptoms. The seminar provided information for discussion on the principles, practices, and the use of TCM and TIM for alleviating menopausal symptoms. The presence of TCM and TIM experts during seminars allows participants to engage directly with TCM and TIM experts to enhance their understanding and address specific concerns.

Following the seminar, a post-interview session was conducted to measure any changes in knowledge, attitudes, and acceptance of TCM and TIM among the participants. This includes understanding their willingness to recommend or incorporate these practices into patient care. By focusing on these components, the study aims to provide insights into the current state of knowledge and acceptance of TCM and TIM among medical doctors and identify opportunities for integrating these traditional practices into the management of menopausal symptoms in a clinical setting.

1.6 Significance of Study

The significance of conducting this study can directly benefit menopausal women (patients), as well as contribute to improvements in healthcare systems, medical doctors' knowledge and acceptance, academics study for future research direction and government Malaysia towards TCM and TIM treatments.

1.6.1 To Patients

This study increases the treatment modalities for managing menopausal symptoms among women (Gyasi et al., 2017). Enhancing the acceptance and knowledge of medical doctors towards TCM and TIM can reduce the disparity between medical doctors' acceptance and understanding of TCM and TIM in relation to menopausal symptoms. This will ensure effective and efficient communication between medical doctors and patients on these modalities (Gyasi et al., 2017), such that this can lead to increased awareness and availability of these treatments as the options for managing menopausal symptoms where menopausal women can choose treatments options that align with their preferences and cultural beliefs on T&CM treatments.

1.6.2 To Medical Doctors

Personal reasons for not recommending TCM and TIM in managing menopausal symptoms among medical practitioners could be identified through this study. By identifying the reasons behind, this could help in addressing the gaps in knowledge, misperceptions or biases (Harnett & Ung, 2023) that medical doctors may hold regarding TCM and TIM. The interventional seminar will be conducted by experts on the TCM and TIM modalities in managing menopausal symptoms supported by scientific evidence, aimed to enhance fundamental knowledge & acceptance towards TCM and TIM in managing menopausal symptoms among medical doctors in Malaysia.

Examining the changes in the knowledge and acceptance after intervention can identify the knowledge gaps and areas for improvement on medical doctors towards TCM and TIM in managing menopausal symptoms in Malaysia.

1.6.3 To Academics

This study is significant for the academic community, particularly in medical education, health sciences, and public health research. By exploring the knowledge and acceptance of TCM and TIM among medical doctors, it

contributes to the academic on T&CM practices in modern healthcare. The findings can inform the development of medical and healthcare education curricula, ensuring comprehensive training in evidence-based TCM and TIM practices.

Additionally, the study offers an opportunity to expand knowledge on menopausal symptoms management and encourage further research into the efficacy and safety of TCM and TIM. By enhancing academic understanding of integrating T&CM (TCM and TIM) into healthcare systems, this research provides a foundation for interdisciplinary studies. It also explores the broader implications of such integration on patient outcomes, healthcare costs, and cultural acceptance. This work can foster a more inclusive approach to healthcare education and practice, benefiting current and future healthcare professionals and patients.

1.6.4 To Government

Lastly, the study may also contribute for future research directions and policy decisions (Chung et al., 2021; Kasilo & Wambebe, 2021) related to the integration of T&CM modalities into mainstream healthcare systems in Malaysia. The government can benefit from this research study by gaining insights into the integration of TCM and TIM treatments into the national healthcare systems. By understanding the acceptance and knowledge of TCM and TIM treatments on menopausal symptoms among medical doctors,

policymakers can make informed decisions regarding healthcare policy, regulation, and resource allocation. The findings of the study can inform the development of policies and initiatives aimed at promoting the safe and effective use of TCM and TIM treatments for menopausal symptoms management, and hence can contribute to enhance healthcare quality, accessibility, and patient satisfaction.

1.7 Operational Definition

Knowledge was transferred from one generation to another through oral communication and apprenticeship (MQA, 2021). In the context of this study, knowledge of TCM and TIM treatments is defined as the extent to which medical doctors are aware of, understand, and are informed about these approaches for managing menopausal symptoms. Based on consumer knowledge literature, knowledge can be understood through three related dimensions: objective knowledge (factual, accurate information about TCM and TIM), subjective knowledge (doctors' self-perceived understanding or confidence in their knowledge), and familiarity (the extent of their practical exposure and experience with such treatments) (Philippe & Ngobo, 1999). This will be assessed through qualitative interviews by exploring medical doctors' familiarity with TCM and TIM practices, the training they have received, their sources of information, and their understanding of the efficacy, safety, and mechanisms of these treatments. The goal is to explore how well-informed they are about these T&CM treatments and its potential role in managing menopausal

symptoms.

Acceptance of TCM and TIM Treatments refers to the degree to which medical doctors are open to, supportive of, and willing to integrate these treatments into conventional medical practice for managing menopausal symptoms (Sekhon, 2017). This will be evaluated through qualitative interviews that assess medical doctors' attitudes, perceptions and views towards TCM and TIM, their willingness to recommend these treatments, their perceptions of the benefits and risks, and the reasons influencing their acceptance or rejection of these traditional modalities. Understanding their acceptance is crucial for determining the potential for integrating these treatments into mainstream medical practice. Menopausal Symptoms are defined as the physical and psychological symptoms experienced by women during the menopause transition, including hot flashes, night sweats, insomnia, mood swings, depression, and anxiety (Monteleone et al., 2018). During the interview session, medical doctors will discuss whether they are aware of TCM and TIM treatments are perceived to manage menopausal symptoms. This provides context for the study, highlighting the relevance of TCM and TIM in managing these common menopause issues.

The terms doctor and medical practitioner are used interchangeably by the Malaysian Medical Council (MMC) to refer to any person registered under the Medical Act 1971. In Malaysia, a medical practitioner must be registered with the MMC and hold a valid Annual Practising Certificate (APC) to practise medicine legally. According to the MMC's Guideline, both terms refer to

individuals listed in the Malaysian Medical Register, which records those legally authorized to practise medicine in the country (Ahmad et al., 2021; Malaysian Medical Council, 2025, 2026). For the purposes of this study, medical doctors refer to qualified practitioners who have completed formal medical training, hold a recognized medical degree, and are fully registered with the MMC. Participants include practitioners from various fields such as internal medicine, family medicine, and obstetrics and gynaecology (O&G), among others. The use of the term medical doctor in this study is also consistent with previous Malaysian research Johny et al. (2017).

1.8 Thesis Outline

This thesis contained five chapters in total. Each chapter represented a specific component of this research. To begin with, Chapter 1 provided an overview of the study. This included the background of the study, the research problem, which encompassed the impact of menopausal symptoms on women's lives, the side effects of MHT, the utilisation of T&CM in Malaysia, and the perception of medical doctors towards T&CM. This chapter also included research questions, objectives, scope of the study, and significance of the study. Chapter 2 discussed the literature review related to the study's topic. This chapter also introduced the knowledge constructs and the Theoretical Framework of Acceptance (TFA), which was applied to the development of the research instrument in this study. Chapter 3 outlined the research design, research instrument, validity and reliability of qualitative data, data collection

procedure, and data analysis. This chapter further elaborates on the software used for data analysis, Atlas.ti, and the type of qualitative data analysis technique that was employed. Chapter 4 presented the results, highlighting four global themes that were explored in detail through a pre- and post-intervention seminar on the use of TCM and TIM in managing menopausal symptoms. These findings offered valuable insights into the knowledge and acceptance of medical doctors regarding TCM and TIM for menopause management. Chapter 5 concluded the study by summarizing the key findings on medical doctors' knowledge and acceptance of TCM and TIM in treating menopausal symptoms. Additionally, this chapter discussed the study's limitations and provided suggestions for future research, offering a broader framework for further exploration.

CHAPTER 2

LITERATURE REVIEW

2.0 Chapter Overview

This chapter consists of five sections. Section 2.1 focuses on T&CM with multiple subsections including Subsection 2.1.1 briefly explains the history of T&CM in Malaysia; Subsection 2.1.2 introduced the concept of T&CM in Malaysia; Subsection 2.1.3 government policies of T&CM in Malaysia; Subsection 2.1.4 explains the use of T&CM among Malaysians; Subsection 2.1.5 describe the significance of development T&CM in Malaysia. Section 2.2 provides a brief discussion on menopause and its symptoms. Subsection 2.2.1 reviewing Traditional Chinese Medicine (TCM) and Subsection 2.2.2 reviewing Traditional Indian Medicine (TIM). Next, Section 2.3 explains T&CM and medical doctors with the following Section 2.4 explains the educational intervention conducted in this study to investigate the knowledge and acceptance of TCM and TIM among medical doctors on menopausal symptoms. Section 2.5 elaborates on the knowledge constructs, including descriptions of subcomponents for each component. Section 2.6 elaborates the Theoretical of Acceptability (TFA) with each component of TFA in health intervention. Lastly, Section 2.7 shows the proposed research framework in this study with the subsections, Subsection 2.7.1 describes the relationship between product knowledge and acceptance; Subsection 2.7.2 describes the relationship

between familiarity and acceptance; Subsection 2.7.3 describes the relationship between expertise and acceptance.

2.1 Traditional and Complementary Medicine (T&CM)

World Health Organization (WHO) defines Traditional Medicine as the collective of knowledge, skill, and practices according to the theories, beliefs, and experiences rooted from different cultures to maintain health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness (World Health Organization, 2013). Meanwhile, the term “Complementary/Alternative Medicine (CM)” refer to a broad set of healthcare practices that are not part of the conventional medicine and not fully incorporated into the mainstream healthcare system but applied interchangeably with traditional medicine in certain countries (World Health Organization, 2013). The T&CM is practised widely across the globe and is gaining popularity in Malaysia, with herbal therapies supposedly being the most common selection (Zakaria & Abdullah, 2021). The T&CM practice is defined as a “form of health-related practice across all the ethnic groups, as well as homeopathy and complementary therapies but excludes medical and dental practices used by medical and dental practitioners, respectively” (Traditional and Complementary Medicine Division, 2017).

2.1.1 History of T&CM in Malaysia

The traditional medicine of Malaysia has a rich history, originating from the practices of the Orang Asli and Pribumi people. It has changed over time, incorporating influences from Hindu-Buddhist, Islamic, Chinese, and Indian cultures (Lim, 2016). Even as modern medicine became more common, T&CM is still an alternative treatment option for people. Traditional medicine in Malaysia was primarily practiced by Orang Asli of the Malay Peninsula and Pribumi of Sabah and Sarawak, with survival and well-being reliant on these practices (Lim, 2016). During 19th century, there were diverse traditional medicine, such as Traditional Chinese Medicine (TCM), Traditional Indian Medicine (TIM) and Modern Medicine (Lim, 2016).

2.1.2 Concept of T&CM in Malaysia

According to the T&CM Division of Malaysia's Ministry of Health (MOH) stated that the therapeutic concept is defined as healing through medicine or therapy that aids in treating diseases or disabilities where this can encompass medications, substances, or activities that support the improvement of mental or emotional health (Kim, 2017). In contrast, the wellness concept refers to modalities that help achieve a balance of positive health in individuals, characterized by enhanced quality of life and a sense of well-being where these modalities focus on maintaining and promoting overall health, rather than just treating specific ailments. By recognizing both the therapeutic and wellness

concepts, Malaysia's approach to T&CM aims to provide a comprehensive and holistic healthcare solution for Malaysian where the integration of T&CM with conventional medicine can help address a wide range of physical, mental, and emotional health needs (Kim, 2017).

Considering the country's cultural and ethnic diversity, there are different types of the T&CM practices in Malaysia such as Traditional Malay Medicine (TMM) comprises Malay Herbs, Malay cupping, Malay massage; Traditional Chinese Medicine (TCM) comprises Acupuncture, Moxibustion, Chinese Herbal Medicine (CHM), Tuina, Cupping, Qi gong; Traditional Indian Medicine (TIM) comprises Ayurveda, Siddha, Unani, Yoga, and Homeopathy; Islamic Medical Practice (IMP) and Complementary Therapy (Institute for Public Health, 2015; Kim, 2017). Currently, there are seven T&CM practice areas are recognised in Malaysia namely TMM, TCM, TIM, IMP, Homeopathy, Chiropractic and Osteopathy.

2.1.3 Government Policies of T&CM in Malaysia

Nowadays, even modern medicine is the mainstream practice in healthcare system of Malaysia, T&CM still act as alternative and complementary treatments option in healthcare (Rahim, 2022). This led to support from the government, include the formation of the Standing Committee on T&CM under Ministry of Health (MOH) in 1998 (World Health Organization, 2019), enforcement of the implementation of Good Manufacturing Practice (GMP)

requirement for traditional medicine manufactures and commencement of the licensing of T&CM manufacturers and importers in 1999 (Park et al., 2022). Besides, institutional support such as the establishment of the Herbal Medicine Research Centre (HMRC) at the Institute of Medical Research (IMR) in 2000, the National Policy on T&CM in 2001 (and was revised in 2007), and the National Committee for R&D on Herbal Medicines in 2002 for the integration of T&CM in Malaysia; subsequently in 2004, the Traditional and Complementary Medicine Division (T&CM Division) was formed (Park et al., 2022; World Health Organization, 2019). In 2010, the Ministry published comprehensive practice guidelines and Good Practice Guidelines for various T&CM modalities to make sure safe and effective delivery of T&CM services (Park et al., 2022). In 2016, the Malaysian government took a significant step by enacting the Traditional and Complementary Medicine Act 2016 (Park et al., 2022). It is important to note, however, that practitioner registration under the T&CM Act 2016 (Act 775) has been implemented progressively in phases beginning in 2021, rather than constituting immediate and comprehensive nationwide regulation. Registration is subject to recognised qualifications, defined practice areas, and registration requirements established by the Traditional and Complementary Medicine Council. As such, it should not be assumed that all T&CM practitioners across Malaysia are already fully registered and regulated at present. A distinction should also be maintained between a formally recognised T&CM practice area, for example Traditional Chinese Medicine, and the specific modalities within that practice area, for example acupuncture, moxibustion, and Chinese herbal medicine, as regulatory recognition operates at the level of practice areas rather than at the level of

individual treatment modalities. Up to December 2022, there are almost 15 government hospitals provided T&CM treatments (e.g., traditional massage, acupuncture, herbal therapy, Shirodhara, external Basti therapy, Varman therapy) in Malaysia (Traditional and Complementary Medicine Division, 2022) (Table 2.1).

Table 2.1 List of Government Health Facilities Offered T&CM services in Malaysia

No.	MOH Hospital	Year Established	T&CM Services Offered
1.	Hospital Kepala Batas, Pulau Pinang	2007	▪ Traditional Massage (TMM) ▪ Acupuncture (TCM) ▪ Herbal Therapy as an Adjunct Treatment for Cancer (TCM)
2.	Hospital Putrajaya, Wilayah Persekutuan Putrajaya	2008	▪ Traditional Massage (TMM) ▪ Acupuncture (TCM)
3.	Hospital Sultan Ismail, Johor	2008	▪ Traditional Massage (TMM) ▪ Acupuncture (TCM) ▪ Herbal Therapy as an Adjunct Treatment for Cancer (TCM)
4.	Sultanah Nur Zahirah Hospital, Terengganu	2009	▪ Traditional Massage (TMM) ▪ Acupuncture (TCM)
5.	Hospital Duchess of Kent, Sabah	2009	▪ Traditional Massage (TMM) ▪ Acupuncture (TCM)
6.	Hospital Sultanah Bahiyah, Kedah	2010	▪ Traditional Massage (TMM) ▪ Acupuncture (TCM)
7.	Hospital Port Dickson, Negeri Sembilan	2010	▪ Traditional Massage (TMM) ▪ Acupuncture (TCM) ▪ Shirodhara* (TIM) ▪ External Basti Therapy* (TIM)
8.	Hospital Umum Sarawak, Sarawak	2010	▪ Traditional Massage (TMM) ▪ Acupuncture (TCM)

9.	Hospital Raja Perempuan Zainab II, Kelantan	2011	▪ Traditional Massage (TMM) ▪ Acupuncture (TCM)
10.	Hospital Rehabilitasi Cheras, Wilayah Persekutuan Kuala Lumpur	2013	▪ Traditional Massage (TMM) ▪ Acupuncture (TCM) ▪ Shirodhara* (TIM) ▪ External Basti Therapy* (TIM)
11.	Hospital Wanita dan Kanak-Kanak Sabah, Sabah	2013	▪ Traditional Massage (TMM) ▪ Acupuncture# (TCM) ▪ Herbal Therapy as an Adjunct Treatment for Cancer (TCM)
12.	Institut Kanser Negara, Wilayah Persekutuan Putrajaya	2013	▪ Acupuncture (TCM) ▪ Herbal Therapy as an Adjunct Treatment for Cancer (TCM)
13.	Hospital Jasin, Melaka	2014	▪ Traditional Massage (TMM) ▪ Acupuncture (TCM)
14.	Hospital Sungai Buloh, Selangor	2017	▪ Varmam Therapy*
15.	Hospital Selayang, Selangor	2022	▪ Acupuncture (TCM)

Remarks: * Services for Shirodhara, External Basti Therapy and Varmam Therapy are temporarily suspended, pending the deputation of new Traditional Indian Medicine practitioners and assistant practitioners by the Government of India.

#Acupuncture service in Hospital Wanita dan Kanak-Kanak Likas is temporarily suspended, due to unavailability of practitioner.

Source: (Traditional and Complementary Medicine Division, 2022; Traditional and Complementary Medicine Division, 2023)

2.1.4 Use of T&CM in Malaysia

Malaysia, with its diverse and multiethnic society, demonstrates varying utilization of T&CM across different ethnic groups. Researchers have shown that Malaysians frequently utilize T&CM, particularly for managing chronic conditions such as diabetes (Baharom et al., 2016), hypertension (Palileo-Villanueva et al., 2022), asthma (Ramdzan et al., 2019) and alleviating side effects of chemotherapy (Syed Mohammad Salleh et al., 2021). Hence, it is suggested that T&CM could be potential effectiveness in reducing menopausal symptoms as well such as Ohn Mar et al. (2015) reported that there are 41.2% of the Ipoh residents used complementary medicine for relieving menopausal symptoms; Similarly, a recent study by Lau et al. (2025) reported that 27.2% of women in Kuala Lumpur utilized T&CM during menopause, with Indian women were the highest prevalence of use.

2.1.5 Significance of Development T&CM in Malaysia

It is significant that Malaysia emphasizes on studying and developing the T&CM in Malaysia due to several reasons. First, T&CM is gaining popularity in a lot of nations not only because of its effectiveness, but also because of its less adverse effects in treating specific ailments, lower price, convenience (Kulkarni et al., 2021). Hence, it is a need for policymakers to understand reasons for people choose T&CM such as due to the rising of healthcare costs, limited access to modern medicine, and a desire for holistic care to make a better healthcare provisions (Aziz et al., 2023). Second, T&CM is significant

economic opportunities for Malaysia which can be a source of income for practitioners, attract medical tourists, and hence can guide policies aimed at fostering T&CM development and growth in Malaysia (Aziz et al., 2023). Lastly, T&CM offers insights into the country's diverse cultural heritage, where T&CM has long been a vital part of each community's traditional healing practices (Aziz et al., 2023).

2.2 Menopause

According to worldwide demographic data, approximately 25 million women experience menopause every year and predicted that 1.2 billion women will face post-menopause by 2030 (L. Du et al., 2020). In Malaysia, the mean age of menopause ranges from 49.4 to 51.1 years, with an average of 50.7 years whereby this suggests that a significant proportion of Malaysian women spend about one-third of their lives in the menopause transition (Syed Alwi et al., 2021). In Malaysia, the population for female in 2020 with age 45-49 is 2.9%; age 50-54 is 2.6%, that's indicated that female with age 45-54, total of 5.5.% of the population were in menopause transition (*Demographic Changes in Asia and the Pacific: Malaysia*, 2023). Population-based studies among Caucasians have shown a higher prevalence of menopausal symptoms, ranging from 40% to 60%, compared to the Asian population, where the prevalence ranges from 10% to 40% (Dennerstein et al., 1993; Nedstrand et al., 1996; Porter et al., 1996). Asian women more commonly report musculoskeletal aches and fatigue, while symptoms like hot flushes,

night sweats, mood swings, and psychological issues are present but generally less severe than those experienced by Caucasian women (Avis et al., 2001; Fuh et al., 2001). In Malaysia, previous reports indicate that 27% of menopausal women were significantly affected by menopause, while 30% experienced only mild symptoms (Abdullah et al., 2017). Vasomotor symptoms (VMS) are a type of temperature dysfunction caused by changes in gonadal hormones (Deecher & Dorries, 2007). VMS, included hot flashes and night sweats, are among the most common problems that menopausal women suffer and there is around 80% of postmenopausal women in the world experience hot flashes (Nappi et al., 2023). In 2015, the percentage of menopausal women experiencing mild, moderate, and severe VMS in Malaysia were 37.1%, 57.4%, and 8.6%, respectively (Taylor-Swanson et al., 2015). However, research conducted by Ohn Mar et al. (2015) in Ipoh, Malaysia showed that 55% of the women reported that their experience on menopausal symptoms as mild, 32% reported moderate intensity, and 13% described their symptoms as very troublesome. Other than that, the authors also reported on other menopausal symptoms that experience by women which include muscle and joint pain (63.4%), poor memory (63.4%), mood changes (58.3%), fatigue (52.8%) and headache (50.8%) respectively (Ohn Mar et al., 2015). Hot flushes affect over 50% of Malaysian women, significantly lowering their quality of life. Women who frequently experience hot flushes have double the risk of developing coronary heart disease within 14 years and are also twice as likely to suffer hip fractures, irrespective of their age, menopause status, lifestyle, or other chronic disease risk factors (CPG: Management Of MENOPAUSE in Malaysia, 2022).

The menopause transition is significantly impacts women's quality of life (QoL) (CPG: *Management Of MENOPAUSE in Malaysia*, 2022). Quality of Life (QoL) is a dynamic and multidimensional concept that is related to mental, physical, and social health (Nosrati et al., 2023). According to the World Health Organization, quality of life is an individual's perception of their position in life within the context of the culture and value systems they live in, as well as their goals, expectations, standards, and concerns (World Health Organization, n.d.). According to a study conducted by Abdullah et al. (2017) in Malaysia, there were 52.4% of women reported that menopause had affect their quality of life, with 2.7% felt it had a severe impact. Despite the negative effects on their quality of life, Malaysian women rarely discuss symptoms related to the genitourinary syndrome of menopause (GSM), such as bladder incontinence, vaginal dryness, painful intercourse, and bleeding during sex; many suffer in silence, accepting these issues as a part of aging, which impacts their self-confidence and partner relationships (CPG: *Management Of MENOPAUSE in Malaysia*, 2022).

Menopausal Hormone Therapy (MHT) previously called Hormone Replacement Therapy (HRT) is one of the most effective conventional medical treatments for menopausal symptoms (Johnson et al., 2019). Evidence indicates that when utilized correctly, it can lower the risk of certain chronic diseases like osteoporosis (Baber et al., 2016). However, there is decline in the prescription of MHT by medical doctors due to the Women's Health Initiative report revealed that MHT had more risks than benefits for all women (Cagnacci &

Venier, 2019). Despite more evidence highlighting the advantages of MHT in lowering the cardiovascular risks and preventing osteoporosis, the utilization of MHT still continues to decrease (Cagnacci & Venier, 2019). Therefore, women are choosing to rely on Traditional and Complementary Medicine (T&CM) (Table 2. 2 provides a summary of published treatment choices that are most preferable by menopausal women with a focus primarily on T&CM options for managing menopausal symptoms.)

Table 2. 2 Summarize of published treatment choices of menopausal women

Source	Target Population	Aim of Study	Study Design	Result/Findings
(Manoharan et al., 2023)	Women who seeking consultation with medical professionals	To evaluate symptoms of menopause, behaviours related to seeking treatment, treatments received, and factors influencing the decision to consult healthcare providers (HCPs)	A cross-sectional survey was done in 6 primary care clinics	Many women experience menopausal symptoms and show a preference for complementary and alternative medicine (CAM) over HRT.
(Zhou et al., 2023)	Perimenopausal women	To investigate the utilization of CAM by perimenopausal women	A cross-sectional study conducted in Wuhan, China	50.4% of perimenopausal women utilized CAM for alleviating the symptoms and most commonly used CAM were walking (exercise), massage, and herbal therapies.
(Wang & Yu, 2021)	Perimenopausal and early postmenopausal women	To investigate the use of TCM for treating menopausal symptoms in Asian countries	Review	Asian women are more inclined to choose TCM in terms of therapeutic method, and MHT has low acceptance because the women have been misinformed about the side effects of hormones
(Li Du et al., 2020)	Women between the ages of 40 and 60	To specify prevalence and severity of menopausal symptoms among middle-aged women	A community-based cross-sectional study (stratified sampling & quota sampling)	In China, the use of MHT among women was very uncommon, with only 3.78% opting for this treatment. The most common treatment choice was traditional Chinese medicine, chosen by 43.58% of women

(Ebrahimi et al., 2020)	Menopausal women	To examine the impact of herbal medicine, acupressure, and acupuncture on menopausal symptoms	Systematic review	Women prefer complementary medicine compared to hormone therapy because of concerns regarding its side effects
(Cardini et al., 2010)	1203 meno and post-menopausal women with aged 45-65 years in Bologna	To investigate the use of CAM by menopausal women in Bologna	Non-random sampling Questionnaire	A significant portion of menopausal women use CAM, but most doctors do not inquire about it, and many women do not disclose their CAM use. Most popular modalities are Herbals (41%), soy (26%), homeopath (11%).
(Kupferer et al., 2009)	562 menopausal women (US)	To investigate the utilization and perceived effectiveness of CAM and non-hormonal conventional medicine options for managing vasomotor symptoms after discontinuation of hormone therapy	Random sampling Postal and email questionnaire	Most common modalities are Black cohosh (21%), soy (19%), antidepressants (14%), meditation and relaxation (12%), evening primrose oil (8%).
(van der Sluijs et al., 2007)	1296 menopausal women (AUS)	To assess the prevalence of CAM usage among women for relieving menopausal symptoms	Non-random sampling Questionnaire	Almost 53.8% had visited a CAM practitioner/ CAM product; massage, chiropractic, and nutrition are the most effective therapies
(Gingrich & Fogel, 2003)	40 perimenopausal women (US)	To outline the frequency of herbal use among women experiencing perimenopause and how often they disclose usage to healthcare providers	Non-random sampling Questionnaire	Two thirds of the women had used herbs for perimenopausal symptoms. 60% reported that their healthcare provider had never inquired about their herbal use.

2.2.1 Traditional Chinese Medicine (TCM)

Traditional Chinese Medicine (TCM) is a universal term that used to describe a group of medical practices which are originally from China and has almost 3,000 years of roots (Tozun et al., 2022). Since the late 1990s, the market for TCM has been quickly expanding (Xu & Xia, 2019), and TCM included acupuncture, moxibustion, Chinese Herbal Medicine (CHM) and other disciplines named as dietary therapy, tai chi and meditation (Holloway & Galvin, 2023). TCM has been extensively explored for its effectiveness in alleviating menopausal symptoms (Kronenberg & Fugh-Berman, 2002).

In TCM, menopause is seen because of imbalances in *Jing*, a vital substance stored in the kidneys. This imbalance leads to disruptions in the *Yin Yang* harmony, manifesting as symptoms like hot flushes due to *Yin*'s inability to counteract *Yang* properties effectively (Kwee et al., 2007; Wang & Yu, 2021). A fundamental principle underlying TCM diagnosis is syndrome differentiation (*biàn zhèng*, 辨证), in which the practitioner maps the patient's full constellation of signs and symptoms to a specific pattern of internal disharmony rather than a single biomedical diagnosis. In the context of menopause, this means that two women presenting with hot flushes may receive entirely different treatments depending on their differentiated pattern. According to a research study, Asian women choose to rely on TCM rather than the western medical therapy, because of the side effects of MHT and TCM is extensively used to treat menopausal symptoms in Asian nations such as China, Japan, Vietnam, and South Korea (Wang & Yu, 2021). Studies have demonstrated that TCM treatments, including

Chinese herbal medicine, acupuncture, meridians, auricular point therapy, moxibustion, and Chinese massage, effectively reduce menopausal symptoms (Taylor-Swanson et al., 2015; Xing et al., 2023). Building on the principle of syndrome differentiation, TCM recognises three primary menopausal patterns arising from Kidney deficiency.

Kidney Yin Deficiency is the most common pattern. As the natural decline of Kidney essence (jing) accelerates with age, the cooling and nourishing function of Yin becomes insufficient to restrain Yang. This relative excess of Yang generates "empty heat" (虚热 xu re), manifesting clinically as hot flushes, night sweats, afternoon fever, irritability, insomnia, and dry mouth. The tongue is typically red with little coating, and the pulse is thin and rapid (Kwee et al., 2007; Wang & Yu, 2021). Kidney Yang Deficiency presents with the opposite pattern: cold intolerance, fatigue, low back pain, oedema, and frequent urination. Rather than empty heat, patients experience a failure of the warming and activating function of Yang. The tongue is pale and moist, and the pulse is deep and weak. Mixed Kidney Yin-Yang Deficiency is also recognised, particularly in later postmenopausal stages, where both cooling and warming functions are diminished simultaneously. Treatment must tonify both Yin and Yang while carefully balancing the prescription to avoid aggravating either deficiency.

The therapeutic logic of Chinese Herbal Medicine (CHM) for menopausal symptoms differs fundamentally from the single-active-ingredient model of conventional pharmacology. CHM formulations are constructed according to

the Jun-Chen-Zuo-Shi (君臣佐使, "monarch-minister-assistant-courier") prescriptive principle, in which a principal herb targets the primary pattern, supported by herbs that reinforce its action, moderate toxicity, and direct the formula to the target organ system (Li et al., 2010; Yuan et al., 2016). Therapeutic effect arises from the synergistic interaction of multiple compounds acting on an individualised syndrome pattern, rather than from one isolated molecule acting on one target (Efferth & Koch, 2011; Yuan et al., 2016). In terms of evidence-based mechanisms, CHM formulations for menopausal symptoms are proposed to exert effects through phytoestrogenic activity, in which plant-derived compounds such as isoflavones and lignans bind to oestrogen receptors and partially regulate the hypothalamic-pituitary-ovarian (HPO) axis (Borud & White, 2010; Lethaby et al., 2013). Adaptogenic modulation and direct thermoregulatory effects have also been proposed (Ebrahimi et al., 2020). Chinese Herbal Medicine (CHM) offers diverse forms of preparations, including traditional decoctions from raw herbs, pills, liniments, plasters, and ointments (Zhu et al., 2016). Modern pharmaceutical methods have further expanded options to include concentrated power and liquid extracts. Several research has focused on exploring the effectiveness of CHM for managing menopausal symptoms. For example, *Dong quai* is a traditional Chinese herb commonly used in combination with other herbs to address issues related to the female reproductive system where it is derived from the root of *Angelica sinensis* and used in various herbal preparations. The investigation of *Dong quai* was conducted in a double-blind, placebo-controlled RCT, the Phyto-Female Complex, which combines *Dong quai* with other herbs (i.e. black cohosh, milk thistle, American ginseng), led to a 73% reduction in

hot flashes and a 69% reduction in night sweats and it was also reporting better sleep quality (Rotem & Kaplan, 2007). However, normally it is difficult to determine the effects of *Dong quai*, and it may be effective only in combination with other herbs (Johnson et al., 2019).

Acupuncture, a part of the TCM practices which had at least 2500 years (Kang et al., 2002). It is almost supplied by 129 countries, and 80% of them recognize the use of acupuncture (World Health Organization, 2013). It involved inserting small metal needles in a selected points of the body that effectively alleviates menopausal symptoms within perimenopausal and postmenopausal stages like relieving neuropsychiatric symptoms and pain. Although, there is a study cited minor side effects like swelling, fatigue, or pain (Li et al., 2011), the typically target acupuncture points for menopausal women are in the limbs, waist, abdomen, or head which hence it is considered safe that performed by high skilled experts (Qin et al., 2021). In TCM, acupuncture is believed to alleviate pain and symptoms by balancing the flow of meridian energy (Qi) (Ebrahimi et al., 2020). Several studies have investigated the mechanism of acupuncture in relieving menopausal symptoms (hot flashes) through various pathways; First, it may regulate the autonomic nervous system by up-regulating the parasympathetic system, counter-balancing the over-excited sympathetic system, and thus alleviating hot flashes (Chien et al., 2017). Acupuncture also stimulates endorphin secretion, which helps restore the balance of neurotransmitters in the hypothalamus, reducing hot flashes and related symptoms (Borud & White, 2010; Ebrahimi et al., 2020; Freedman & Krell, 1999). Additionally, acupuncture may influence hypothalamic neuropeptides

like Neurokinin B, which are involved in hot flashes (Jayasena et al., 2015). Several studies have proved that the positive effects of acupuncture in alleviating menopausal symptoms (Refer Table 2.3). A systematic review and meta-analysis indicated that acupuncture combined with CHM (Chinese herbal medicine) is more effective in the treatment of menopausal symptoms, and its benefits are seen primarily in improving sleep quality and balancing sex hormones (Z. Li et al., 2023; Shao et al., 2009).

Another TCM practice is Acupressure which is a safe and non-invasive technique that involves applying pressure to specific points on the skin using the fingers, hence it is a method that can be used by various professionals, including physicians, nurses, and individuals themselves (Armand et al., 2017). Chinese believe that the human body has a network of energy channels akin to the vascular and circulatory systems, consisting of 12 major meridians, several communication pathways, and 361 acupressure points, which significantly impact health when problems arise (Schacht, 1999). Acupressure balances vital energy by releasing neurotransmitters and hormones, which in turn alleviates early menopausal complications (Ebrahimi et al., 2020; Tsay et al., 2008). The positive effects of acupressure on menopausal symptoms have been proven (Refer Table 2.3).

Additionally, Chinese Traditional Exercise (CTE) may include Taichi (Innes et al., 2008), Qigong (Carcelén-Fraile et al., 2022), Baduanjing (Lei et al., 2024) and Yijinjing (J. Li et al., 2023), may applied for relieving depression symptoms for menopausal women. CTE originated from Chinese medicine, which

combines training and treatment in the form of “toning the body, toning the breath, and toning the mind” (Sancier, 1996). For example, according to Carcelén-Fraile et al. (2022) had revealed that Qigong contributed for relieving severity of menopausal symptoms such as depression, urogenital levels and somatic symptoms.

Table 2.3 Summarize of published beneficial effects of TCM on menopausal symptoms

Source	Aim of Study	Study Design	Menopausal Symptoms	Type of TCM treatment	Result/Findings	Side Effects
(Lei et al., 2024)	To systematically assess the impact of Chinese Traditional Exercise (CTE) on depressive symptoms in women during perimenopause and post menopause	Meta-analysis (randomized controlled trial studies)	Depression	CTE: Taichi, Baduanjin, Yijinjing, and Qigong	CTE could be an effective treatment for depressive symptoms in perimenopausal and postmenopausal women. Taichi and Baduanjin are particularly beneficial exercises.	Not Applicable
(Zhang et al., 2020)	The effectiveness and safety of a new, improved herbal formula on menopausal symptoms	A randomized, single-blind, placebo-controlled trial	Hot flushes, depression, anxiety, and sleep disturbances	Improved Chinese herbal medicine, ‘Gengnianchun’ (I-GNC)	TCM herbal formula I-GNC can reduce the menopausal symptoms among peri- and postmenopausal women.	No obvious adverse effects

(Wen et al., 2017)	Comparison of the effects of manual acupuncture and electrical acupuncture on menopause	Randomized clinical trial	Depression, anxiety	Manual acupuncture (MA) & Electroacupuncture (EA)	Substantial reduction in symptoms of depression and anxiety	The severe adverse reactions were not found in the treatment
(Armand et al., 2017)	The impact of acupressure on early menopausal symptoms	Blind random clinical trial and placebo-controlled	Hot flashes, night sweats, anxiety	Acupressure (acupressure wrist brace)	Reduce menopause complications	Not applicable
(Chiu et al., 2015)	To evaluate the effects of acupuncture on hot flash frequency	Meta-analysis of randomized controlled trials	Hot flashes	Acupuncture	Acupuncture improves hot flash frequency and severity	Not applicable
(Taylor-Swanson)	To evaluate the potential benefits of TCM interventions	Systematic review of	Hot flushes, night awakenings,	Acupuncture, CHM, Moxibustion	TCM modalities could reduce hot flushes, demonstrated benefits for sleep and pain, and	Not applicable

et al., 2015)	for managing menopausal symptoms	controlled clinical trial	depressed mood, pain symptoms		improvement in mood symptoms.	
(Baccetti et al., 2014)	To evaluate the effects of a treatment with acupuncture on the occurrence of hot flushes and selected menopausal symptoms in women	Randomized controlled trial	Hot flushes, sudden sweating, sleep disorders, irritability, bone pain, depressed	Acupuncture, Dietary recommendations, self-massage	The findings support the effectiveness of acupuncture as part of an integrated TCM approach for managing menopausal symptoms.	No adverse effects, has no contraindications
(Kung et al., 2011)	The correlation between self-reported sleep quality and cardiac autonomic nervous system activity among women experiencing postmenopausal insomnia treated with auricular acupressure	A pretest/post-test study	Insomnia	Auricular acupressure	Enhances cardiac parasympathetic activity and reduces sympathetic activity, thereby improving sleep quality	Not applicable

2.2.2 Traditional Indian Medicine (TIM)

Traditional Indian Medicine (TIM) also known as AYUSH encompasses various systems, each with its unique principles and practices. It included Ayurveda, Siddha, Unani, Yoga, Meditation, Homeopathy and Naturopathy. Ayurveda is the oldest healthcare history with about 10,000 years and is widely used in Traditional Indian medical practice. Ayurveda consists of a holistic approach to manage menopausal symptoms, by considering menopause as a natural phase involving imbalances in Tridosha, Dhatukshaya, and Agni. In Ayurvedic classical texts, including the Ashtanga Hridayam and Charaka Samhitha, menopause is termed Rajonivrutti, defined as the natural cessation of menstruation arising from the progressive decline of Dhatus (bodily tissues) and the diminishing influence of Tridosha with advancing age (Kulkarni et al., 2021). Two types of Rajonivrutti are recognised: Kalaja Rajonivrutti, which occurs naturally at approximately 50 years of age, and Akalaja Rajonivrutti, which refers to premature or delayed cessation. Crucially, Ayurveda does not treat menopausal symptoms as a single clinical entity but interprets them through the dominant dosha presenting in each individual. Vata dominant menopausal presentation is characterised by vaginal dryness, cold extremities, sleep disturbance, anxiety, palpitations, bloating, and constipation. Pitta dominant presentation manifests as intense hot flushes, night sweats, irritability, heavy periods with burning sensation, and skin rashes. Kapha dominant presentation is associated with weight gain, lethargy, depression, fluid retention, and reduced motivation (Solanki et al., 2023). Treatment is therefore individualised according to the dominant dosha pattern, aiming to restore

constitutional balance rather than suppress isolated symptoms. Treatment focuses on lifestyle adjustments, herbal remedies, and Rasayana therapy with the strategies of Panchakarma, herbal medicine, and personalized daily routines with dietary and lifestyle changes (Kulkarni et al., 2021; Solanki et al., 2023). Many case studies observing Panchakarma and Ayurveda protocols show better efficiency in improving menopausal symptoms (Meher et al., 2022; Solanki et al., 2023). In addition, with the aid of the Panchakarma techniques indicated in Ayurveda, the patient has moderate improvement in sexual issues with no negative side effects. Thus, Ayurvedic Panchakarma methods might prevent the negative effects of hormone treatment (Aher et al., 2022).

Oestrogen-promoting Ayurvedic herbs are also recommended for menopausal symptoms like Motherwort, red clover, and saw palmetto. The most nourishing herbs for menopause in Ayurvedic medicine are aloe vera gel, shatavari, ashwagandha, kapikacchu, triphala, dashamula, brahmi, gotu kola, vidari, saffron, and amalaka (Sommer). Among these, shatavari and ashwagandha have attracted the most clinical attention for menopausal symptom management. Shatavari is considered the primary female reproductive tonic in Ayurveda and is proposed to exert phytoestrogenic effects through steroidal saponins that modulate oestrogen receptor activity, thereby alleviating vasomotor symptoms and supporting hormonal balance (Mohammad-Alizadeh-Charandabi et al., 2013; Panda et al., 2018). Ashwagandha is classified as a Rasayana, or rejuvenating adaptogen, and has been shown to reduce cortisol levels, regulate the hypothalamic-pituitary-adrenal axis, and alleviate vasomotor and psychosocial menopausal symptoms including anxiety, fatigue, and cognitive

decline (Mohapatra et al., 2022; Steels et al., 2018). Triphala, a formulation combining three fruits, namely amalaki, bibhitaki, and haritaki, provides antioxidant, anti-inflammatory, and digestive regulatory effects, making it a commonly prescribed Rasayana for the postmenopausal stage (Kulkarni et al., 2021). These herbs are typically prescribed not as single compounds but as part of compound formulations matched to the patient's dosha-specific presentation, consistent with Ayurveda's holistic and individualised prescriptive logic. Scientific evidence suggests that the TIM approach of “Siddha medical herbs” containing phytoestrogens such as soya, black gram, asparagus, and herbal antioxidants like turmeric, green tea, bringaraj, and licorice provide significant benefits to menopausal women (Sulekha, 2022). Siddha medicine, one of the oldest medical systems originating from Tamil Nadu, India, approaches menopause through the concept of elemental imbalance among the three humors: Vatham, Pitham, and Kapham, which parallel the Ayurvedic dosha system. Its use of phytoestrogen-rich plant sources, including soya, black gram, and asparagus, alongside potent herbal antioxidants, addresses both vasomotor and psychological menopausal symptoms through hormonal regulation and oxidative stress reduction (Sulekha, 2022). According to Steels et al. (2018) formulated new Ayurvedic medicine consists of *Tinospora cardifolia*, *Asparagus racemosus*, *Withania somnifera* and *Commiphora mukul*, which is safe and effective in relieving vasomotor symptoms of menopause and able to improve psychosocial and adverse sexual symptoms.

Another TIM approach known as Unani, where Unani medicine is based upon Humoral Theory which presupposes the presence of four humors: blood (Dam),

phlegm (Balgham), yellow bile (Safra), and black bile (Sauda) (Miraj & Kiani, 2016; Naushin et al., 2016). Health is believed to be a balance of these humors (Miraj & Kiani, 2016; Rafatullah & Alqasoumi, 2008). According to Unani literature, “Sinne ya’s” (Menopause) which represents period of Zamane naumaidee (hopeless period) (Naushin et al., 2016). Mizaj (temperament) which is an important concept of Unani medicine, represents the metabolic constitution, psychological make up and behavioural pattern of an individual (Rafatullah & Alqasoumi, 2008). Based on Mizaj, humans are classified into four types: sanguine (Damvi), phlegmatic (Balghami), choleric (sagrawi) and melancholic (saudawi) (Naushin et al., 2016; Rafatullah & Alqasoumi, 2008). The age group of 35-60 years is known as sinne kahulat in which mizaj becomes barid (cold) and yabis (dry) (Naushin et al., 2016). For example, a menopausal woman with a choleric temperament (hot and dry) might experience more severe hot flashes and would benefit from cooling and moistening remedies. Hence, Naushin et al. (2016) revealed that Unani was effective and safe for ameliorating somatic, psychological and urogenital symptoms on menopausal women (Refer Table 2.4).

Yoga originating from Hindu disciplines but has evolved into diverse practices globally. Yoga offers multiple benefits that contribute to overall health and well-being. It enhances mental clarity and emotional stability, promotes good posture, better breathing, improved digestion, better blood circulation, and a strengthened immune system which these physical benefits extend to the functioning of the digestive, endocrine, circulatory, and respiratory systems (Gangadharan et al., 2024). Previous studies have shown the benefits of Yoga

in treating or relieving menopausal symptoms (Christina et al., 2020; Lu et al., 2020; Swain et al., 2021). For example, Yoga could effectively alleviate the depressions and anxiety of menopausal women by improving sleep quality (Lu et al., 2020). Moreover, Yoga practices showed less vasomotor symptoms such as reducing hot flashes, night sweats, and levels luteinizing hormone (LH) and follicle-stimulating hormone (FSH) and memory/concentration disorders (e Souza et al., 2022; Gangadharan et al., 2024). One of the specific forms of Yoga which known as Sudarshan Kriya Yoga (SKY) showed a positive impact on menopausal symptoms, such as having regular SKY practice may help alleviate vasomotor symptoms and improve psychosocial and physical menopausal symptoms (Swain et al., 2021). In addition, by combining Trataka meditation with Yoga could significantly improve and effectively in reducing menopausal symptoms (Chethana et al., 2022).

Table 2.4 Summarize of published beneficial effects of TIM on menopausal symptoms

Source	Aim of Study	Study Design	Menopausal Symptoms	Types of TIM modalities	Result/Findings	Side Effects
(Kulkarni et al., 2021)	To offer a thorough insight into menopause from an Ayurvedic viewpoint	Review article	Hot flushes, Night sweats, Palpitations, Insomnia, Mood changes, Vaginal dryness, Osteoporosis, Urinary incontinence	Ayurvedic medicine	Ayurveda offers effective management for menopause through Panchakarma therapies, herbal remedies, Rasayana therapy	Without creating any adverse effect
(Steels et al., 2018)	To assess the safety and effectiveness of an Ayurvedic botanical blend in reducing menopause-related symptoms, including vasomotor symptoms	A single-site, double-blind, randomized, placebo-controlled clinical trial	Vasomotor symptoms (hot flushes), psychotic disorder, sexual symptoms (vaginal dryness, avoidance of intimacy)	Formulated Ayurvedic medicine (Tinospora cardifolia, Asparagus racemosus, Withania somnifera, & Commiphora mukul)	A combination of Ayurvedic herbs is effectively in alleviating menopausal vasomotor symptoms and enhancing psychosocial well-being and sexual symptoms	Not applicable
(Chaturvedi et al., 2016)	To investigate the impact of Hatha yoga therapy versus regular physical exercise on fasting blood sugar (FBS), glycated	non-randomized controlled study	Blood sugar & GHB levels	Hatha Yoga	Improving menopausal symptoms, lowering blood glucose level, low-density lipoprotein, total cholesterol, serum triglyceride concentration,	Not applicable

	haemoglobin (GHB), thyroid-stimulating hormone (TSH), serum cortisol, & total plasma thiol levels in perimenopausal women				and glycated haemoglobin level among perimenopausal women	
(Naushin et al., 2016)	To compare the effectiveness and safety of Unani formulation with placebo in alleviating somatic, psychological, and urogenital symptoms	Prospective, single centre, single-blind, simple randomized, placebo controlled parallel design study	Hot flushes, heart discomfort, sleep problem, depression, irritability, anxiety, physical & mental exhaustion, sexual problem, bladder problem, dryness of vagina, joint & muscular problem	Unani	Unani formulation was effective and safe than placebo for ameliorating somatic, psychological, and urogenital symptoms	Not applicable
(Chattha et al., 2008)	To assess the efficacy of an integrated approach of yoga therapy (IAYT) on cognitive abilities in climacteric syndrome	A randomised control study	Hot flushes, night sweats, remote memory, mental balance, attention, and concentration	Yoga	Improved hot flushes & night sweats, cognitive functions, mental balance, attention, & concentration, delayed & immediate verbal retention, & recognition	Not applicable

2.3 T&CM and Medical Doctors

The use of T&CM among medical doctors is of growing interest globally, as most of the researchers investigated the knowledge, behaviours, perceptions of medical doctors towards T&CM (Tozun et al., 2022).

A qualitative study in Australia explored the opinions of 18 healthcare providers on the use of TCM in cancer patients, revealing that most lacked sufficient knowledge, were concerned about potential negative interactions with conventional treatments, and some believed the positive effects of TCM were merely placebo effects (Gall et al., 2019). According to the study conducted by in Nigeria revealed that almost 65.2% of medical professionals did not know the names of traditional medicines whereby this had shown the gaps in knowledge and the practices of T&CM by medical doctors which causing for their ability to refer patients who may require T&CM treatments (Onche et al., 2024). In addition, even TCM is integral part of the healthcare system in China, however there are challenges related to the integration of TCM with Western medicine such as medical professionals often face difficulties in balancing traditional practices with evidence-based medicine, the implementation of artificial intelligence (AI) in TCM treatment (Li et al., 2024).

In Malaysia, there is a significant need to understand how medical doctors perceive and use T&CM in their practice. For example, many medical doctors are uncertain about the roles of T&CM practices in managing menopause-related symptoms, thereby they may be unable to adequately advise patients on

the benefits, limitations, and potential risks, such as concerns about the safety of herbs used concurrently with conventional treatments. Due to this uncertainty and lack of knowledge, medical doctors may be hesitant to recommend T&CM to their patients. Additionally, medical doctors may not be aware of the availability of T&CM practitioners, hence, this further limiting their ability to refer patients to T&CM treatments (Abuduli et al., 2016). A study conducted by Ong et al. (2024) revealed that medical doctors in Malaysia were reported as the least likely group to recommend or provide information for alternative medicine, compared to recommendations from friends or neighbours or relatives.

Despite this lower engagement, the positive word-of-mouth from physicians can significantly influence public confidence and trust in T&CM treatment services as one of the treatment methods accepted globally where similar pattern was observed in past studies which found physicians' recommendations significantly affect the patient's decisions in seeking treatment (Eggeling et al., 2020; Siti Aishah et al., 2022).

2.4 Educational Intervention

One effective way to address lack of knowledge among medical doctors is through upskilling, which involves attending seminars, training, or workshops. Educational intervention creates opportunities for medical doctors to better understand their knowledge level and acceptance of TCM and TIM treatment on menopausal symptoms and the alternative therapies for menopause women.

Educational interventions are diverse and multifaceted, encompassing various strategies aimed at improving educational outcomes. The design and effectiveness of an educational intervention in changing behaviour of medical doctors have been discussed in various studies (Eccles et al., 2003; Figueiras et al., 2006; Gao et al., 2012; Zamri et al., 2020). Educational intervention may include educational workshop (Farha et al., 2018; Wong et al., 2019), lecture lasted 135 minutes (Cai & Boyd, 2018), seminar (Opadeyi & Isah, 2019), and online interactive learning modules (Baydoun et al., 2022). Educational workshops may help improve understanding and perceptions of therapy and its adverse impacts (Farha et al., 2018). According to the World Health Organization (WHO) stated that promotes research and training programs to ensure the safe and efficient utilization of traditional medicine (World Health Organization, 2013).

Clement et al. (2005) highlighted the need for educational interventions on herbal medicine for medical doctors due to a significant knowledge gap such that medical doctors lack of knowledge of herbal treatments' uses, benefits, and risks, which limited in effective patient guidance. Hence, according to suggested educational interventions included incorporating herbal medicine education into medical school curricula and offering continuing education programs can significantly improve medical doctors' knowledge and management of herbal treatments for patients.

2.5 Knowledge Constructs

A study findings revealed that medical doctors generally open attitude towards traditional and complementary medicine (T&CM) treatments, but the majority of them do not feel equipped to discuss T&CM with their patients or provide referrals highlighting the need to address the knowledge gap and educational needs in this area (Abuduli et al., 2016). The reason for unqualified feeling is due to lack of knowledge of TCM and TIM among medical doctors where knowledge is the key that helps strengthen and perform integration of both conventional and T&CM into healthcare system in Malaysia (Ung et al., 2017). Knowledge on TCM and TIM could cultivate a positive attitude among medical doctors towards alternative treatment options, potentially breaking down barriers for menopausal women seeking traditional alternatives. This is supported by studies demonstrating the beneficial effects of TCM and TIM on menopausal symptoms. To study the knowledge of medical doctors, knowledge construct will be measured mainly based on the typology of Philippe and Ngobo (1999) who introduced that one's knowledge can be assessed based on his/her familiarity (one's consumption experiences) and product knowledge where can be categorized into product class information and expertise (PCI). PCI refers to the amount of information stored in one's memory, while expertise refers to one's perceived or actual ability to perform product-related tasks. Some studies (Brucks, 1985; Cordell, 1997; Flynn & Goldsmith, 1999) have classified various types of knowledge such as product knowledge, declarative knowledge, procedural knowledge, objective knowledge, self-assessed or subjective knowledge, prior experience through direct and indirect exposure, familiarity,

expertise. Hence, by reviewing some previous typologies of knowledge construct (Figure 2. 1), there are 3 knowledge constructs to be discovered the medical doctors' knowledge of TCM and TIM treatments on menopausal symptoms which comprise system health/ product knowledge, familiarity explains experience, and expertise.

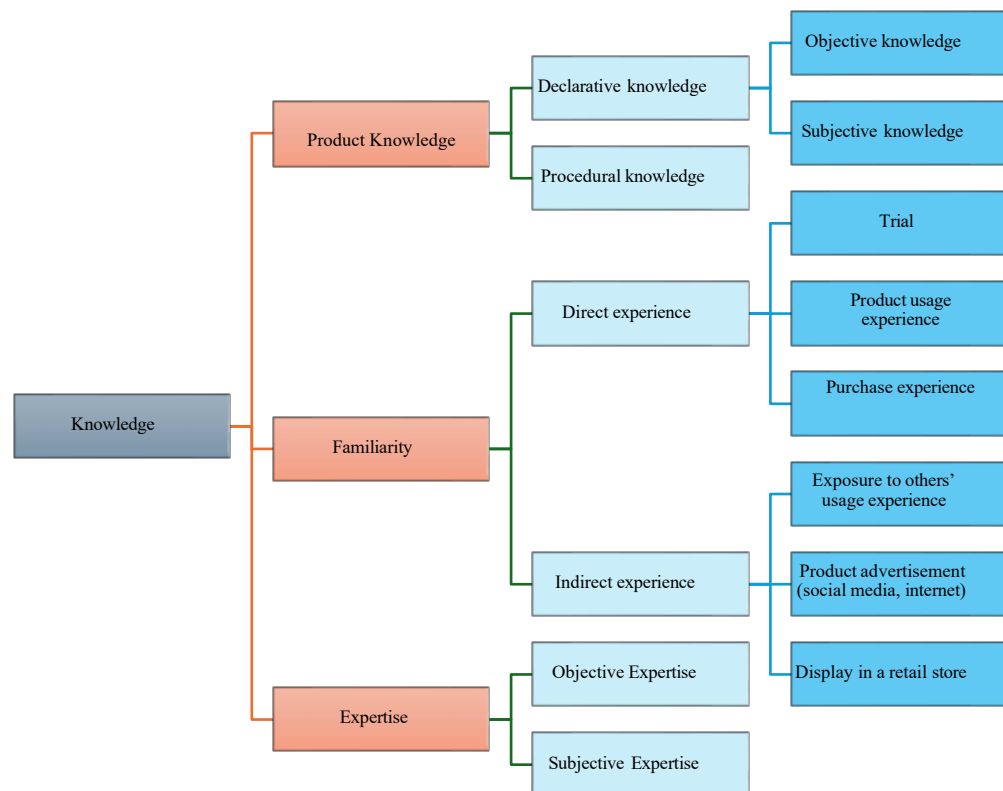


Figure 2. 1 Knowledge

Source: Philippe, A., & Ngobo, P.-V. (1999). Assessment of consumer knowledge and its consequences: A multi-component approach. ACR North American Advances.

2.5.1 Product (TCM/TIM) Knowledge

Product knowledge encompasses medical doctors' knowledge of TCM/TIM, including their principles, techniques, benefits, and usage (Wang & Hazen, 2016). For instance, medical doctors have the responsibility to be knowledgeable about TCM/TIM products/ treatments to ensure the safety and appropriateness to be use by the consumers, it may also include knowledge on how TCM and TIM assess the severity of symptoms, such as hot flashes, mood swings, and sleep disturbances, and their potential long-term health impacts. Medical doctors who are knowledgeable with the products able to respond to enquiries regarding TCM/TIM products effectively for patients (Ung et al., 2017). Product knowledge can be categorized into declarative knowledge, which involves factual information, and procedural knowledge which pertains to skills and techniques. Objective knowledge is measured by detecting the true knowledge; while subjective knowledge reflects medical doctors perceptions and self-evaluation strategies (Cordell, 1997; Park & Lessig, 1981).

Declarative knowledge, also known as descriptive, formal, or propositional knowledge, represents the factual information that individuals consciously store in their memory (Saks et al., 2021). This type of knowledge involves knowing facts, concepts, and information about a subject, such as product features, specifications, or characteristics. For example, based on TCM views, the occurrence of menopause is due to decline in Yin and Yang energy and causing the imbalance of Qi in the body, where the decline in Yin may lead to various menopausal symptoms, and hence by utilising TCM treatments can regulate the

flow of Qi and balance the Yin and Yang in the body. Declarative knowledge is considered static in nature, meaning that it remains relatively stable over time and is consciously accessible for recall when needed. Individuals acquire declarative knowledge through various sources, including education, personal experience, and information obtained (i.e., advertisement, reviews) (Shen, 2008). This knowledge provides the foundation for understanding and evaluating TCM and TIM treatments for menopausal symptoms, allowing medical doctors to make informed decisions based on their knowledge of relevant facts and information.

Objective knowledge refers to accurate and verifiable information about a product or subject matter. It is measured through methods that aim to detect the true extent of an individual's knowledge or understanding (Cordell, 1997). Objective knowledge measures aim to provide an objective and standardized assessment of an individual's knowledge, enabling researchers or practitioners to gauge the level of knowledge across different populations or contexts. Subjective knowledge reflects medical doctors' perceptions, beliefs, and self-evaluation of their knowledge of TCM and TIM (Cordell, 1997). House et al. (2004) discovered that a significant correlation between consumers' willingness to accept genetically modified foods and their personal understanding reflects those medical doctors with higher levels of subjective knowledge results in a stronger desire to accept TCM and TIM treatments.

Procedural knowledge was first introduced by Gilbert Ryle (Ryle, 1945), also known as practical or performative knowledge, refers to the knowledge of how

to perform tasks or accomplish activities using specific strategies, techniques, or procedures which distinguishes between “knowing that” and “knowing how” (Saks et al., 2021). Unlike declarative knowledge, which focuses on knowing facts or information, procedural knowledge emphasizes the ability to apply knowledge in practical contexts to achieve desired outcomes such that medical doctors able to perform TCM and TIM clinical practices on menopausal women by relieving the menopausal symptoms. Procedural knowledge involves knowing how to use, operate, or interact with TCM and TIM treatments effectively. It encompasses the practical skills, techniques, or procedures required to perform tasks such as assembling, operating, troubleshooting, or maintaining a product. For example, medical doctors can perform TCM treatment (i.e., acupuncture) or TIM treatment (i.e., Ayurvedic massage) according to the patient’s needs. However, it is important that by utilizing declarative knowledge for information decision making related to healthcare requires understanding how to apply that information effectively with procedural knowledge (Schulz, 2012). For instance, extensive declarative knowledge with procedural knowledge of TCM/TIM treatments for menopausal symptoms allows medical doctors to apply this knowledge effectively in clinical practice by meeting patients’ requirements.

2.5.2 Familiarity

Familiarity mostly comes from a person's experience, and it will then influence a person's decision making. Familiarity refers to the accumulation of past experience by an individual (Alba & Hutchinson, 1987). Familiarity has been operationalized as accumulated purchases; product usage; search, ownership, and experience (Cordell, 1997). For example, familiarity may influence individual's recognition and acceptance of traditional menopausal symptoms treatments and practices. When individuals are more familiar with certain therapies, remedies, or healing modalities, they may feel more comfortable and inclined to use them to address health concerns. Some medical doctors might be familiar with traditional and complementary medicine as due to cultural or familial knowledge that passed down through generations (Templeman et al., 2016). They may have grown up observing or experiencing T&CM being used within their communities, leading to a sense of familiarity and trust in these practices.

The knowledge of TCM and TIM among medical doctors could be studied through two major types of experience (Daugherty et al., 2008; Han, 2019; Millar & Millar, 1996). A person's prior experience with a particular product can either involve direct interaction with the product itself or indirect interactions relate to it (Mooy & Robben, 2002). Direct experience defined as unmediated contact, involved first-hand interaction, trial, real-life experience or engagement with a participant, whereas indirect experience defined as a mediated experience in which medical doctors do not have a complete

interaction with TCM and TIM treatment before. Direct experience can occur from the sources include trial, TCM or TIM usage experience, and purchase experience whereas indirect experience occurs from diverse sources such as exposure to others' usage experience, product advertisement, or display in a retail store (Han, 2019). Hamilton and Thompson (2007) proposed that direct experience (trial, first-hand experience) and indirectly (exposure to TCM or TIM descriptions) lead to diverse levels of mental construal, with the greater experiential interaction with TCM and TIM results in a more concrete mental construal.

2.5.3 Expertise

Expertise emphasizes the highest levels of learning, including a high level of skills and knowledge in a particular field or area. It can be defined as the ability to successfully perform tasks related to a specific product or domain (Alba & Hutchinson, 1987). According to past studies, scholars introduced two main approaches to study expertise. The first approach is called the relative approach (Chi, 2006), which involves comparing the performance of experts (those who are highly skilled and knowledgeable in a particular domain) with that of novices (those who are less skilled and knowledgeable) in various cognitive tasks, where this could identify and distinguish the specific cognitive skills and abilities of experts from novices. Another approach is called the absolute approach (Chi, 2006) or expert-performance approach (Ericsson & Ward, 2007) which focuses on the behavioural aspect of expertise, aiming to identify the

mechanisms underlying consistent superior performance to make training intervention implications (Ericsson & Ward, 2007). Based on the study of Cordell (1997), expertise is categorised into two types: one gained through repetitive task performance, like a garment worker sewing labels, and the other through understanding a product's capabilities and applying that knowledge. Hence, Alba and Hutchinson (1987) noted that expertise is reflected in consumers' cognitive structures, influencing how they analyse, elaborate on, and remember product information.

Cordell (1997) and Alba and Hutchinson (1987) classified 'expertise' into objective expertise (measured by employing a test) and subjective expertise (measured by using self-evaluation). Objective expertise refers to expertise that is measured using standardized tests and assessments, for example, medical doctors may be involved in specific training or education programmes related to TCM and TIM treatments, which can be performed effectively in clinical practice (Cordell, 1997). Subjective expertise is defined as a person's beliefs, self-perceptions, or judgments about their abilities, skills, and knowledge in a consumption domain (Alba & Hutchinson, 1987). Medical doctors who perceive themselves as knowledgeable or skilled in TCM and TIM may influence their acceptance towards TCM and TIM treatments for menopause-related symptoms. Rudell (1979) discovered that individuals with higher objective expertise used newly acquired information more extensively. In contrast, those with subjective expertise preferred relying on their existing or previous knowledge.

Table 2.5 Summarize of knowledge components applied in different studies

Study, Year	Aims of study	Knowledge Constructs
(Han, 2019)	To explore the interrelations between objective knowledge, subjective knowledge, and prior experience with organic cotton apparel, and their impact on purchasing behaviours	• Objective knowledge • Subjective knowledge • Prior experience
(Daugherty et al., 2008)	To investigate how consumer exposure to indirect, direct, and virtual experiences influences brand attitude, product knowledge, and purchase intention for digital video camcorders	• Direct experience • Indirect experience
(Wirtz & Mattila, 2003)	To explore how consumer expertise, focusing on both objective and subjective knowledge, impacts consumer decision-making processes and loyalty behaviours in professional service settings	• Objective knowledge • Self-assessed/ subjective knowledge
(Mooy & Robben, 2002)	To study the impact of direct product experience on information processing and product evaluation	• Direct experience

Source: Developed for current research

2.6 Theoretical Framework of Acceptability (TFA)

Acceptability is a multifaceted concept representing the degree to which individuals providing or receiving a healthcare intervention believe it to be appropriate, considering the thoughts and emotional reactions they expect or experienced previously (Sekhon, 2017). Hence, based on this study is not just about what treatments are available to manage menopausal symptoms but about what healthcare professionals think, understand and acceptability of the treatments. Acceptability of TCM and TIM among medical doctors is a critical

consideration for alternative treatment options for menopausal symptoms. The Theoretical Framework of Acceptability (TFA) introduced by Sekhon (2017) can be applied across different research methods (qualitative, quantitative or mixed methods) and healthcare interventions. Hence, we will refer to TFA as our topic guide to assess the acceptability of medical doctors on TCM and TIM interventions. As far as we know, no other published studies have employed TFA to define, theorize, and explore the concept of acceptability of T&CM (i.e., TCM and TIM) or other developmental interventions. The TFA consists of seven component constructs, which are affective attitude, burden, ethicality, intervention coherence, opportunity costs, perceived effectiveness, and self-efficacy which can assist in exploring the factors influencing the acceptance of intervention (Sekhon, 2017; Sekhon et al., 2017).

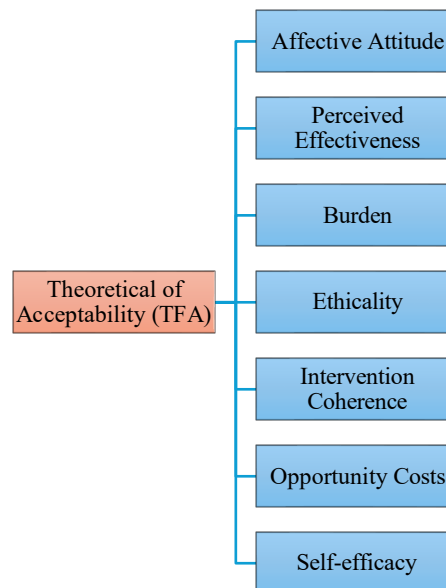


Figure 2.2 Theoretical Framework of Acceptability (TFA)

Source: Sekhon, M. (2017). *Acceptability of healthcare interventions* City, Universtiy of London].

Table 2.6 Definitions of the component in the Theoretical Framework of Acceptability (TFA)

Theoretical Framework of Acceptability (TFA)	Definition
Affective attitude	❖ How an individual feels about the intervention
Burden	❖ The perceived effort required to participate in the intervention
Perceived effectiveness	❖ The extent to which the intervention is perceived as likely to achieve its purpose
Intervention coherence	❖ The extent to which the participant understands the intervention and how it works
Opportunity costs	❖ The extent to which benefits, profits or values must be given up engaging in the intervention
Self-efficacy	❖ The participant's confidence that she/he can perform the actions required to take part in the intervention
Ethicality	❖ The extent to which the interventions was a good fit with the individual's value system

Source: Sekhon, M. (2017). *Acceptability of healthcare interventions* City, Universtiy of London].

TFA can be accessed from different perspectives, which include prospective, concurrent and retrospective acceptability, which indicates before, during or after taking part in the intervention (Sekhon et al., 2017). For instance, prospective acceptability of receiving cancer screening advice (e.g., cervical cancer, bowel cancer, cancer symptom awareness) (Scott et al., 2021); prospective acceptability of healthcare professionals on health promotion delivery (Toomey et al., 2021); prospective acceptability of a healthy lifestyles programme (Bell et al., 2023); concurrent acceptability of a postnatal walking group (Pavlova et al., 2020); retrospective acceptability of mobile health (mHealth) for cancer survivors with obesity or overweight (Groarke et al., 2021) (Refer Table 2.7). Many studies applied the TFA to develop questionnaires (Aboaja et al., 2021; Dinah et al., 2024; Sekhon et al., 2022) or online (web-based) surveys for the assessment of acceptability (Keyworth et al., 2021;

Renko et al., 2020; Richardson et al., 2024). There are some studies that applied TFA to inform interview guide (topic guide) (Groarke et al., 2021; Ngowi et al., 2021; Pavlova et al., 2020; Paynter et al., 2023b). Therefore, the adoption of TFA in this study enhances the methodological robustness, facilitates a deeper understanding of acceptability of educational interventions of TCM and TIM for managing menopausal symptoms among medical doctors in Malaysia.

Table 2.7 Summarize of published TFA in various fields/areas

Study, Year	Aims of study	TFA constructs	Areas	Method
(Paynter et al., 2023a)	To explore the used of the TFA to access acceptability of surgical interventions	- Seven dimensions of TFA - An additional construct: ‘perceived risk and safety’ - Replacement construct: ‘Opportunity costs and gains’	Surgical interventions	Qualitative (semi-structured interview)
(Timm et al., 2022)	To evaluate the perceived acceptability of a telephone-facilitated health coaching intervention aimed at preventing and managing type 2 diabetes, utilizing a questionnaire based on the TFA	Seven dimensions of TFA	Type 2 diabetes	Quantitative (Likert scale questions)
(Scott et al., 2021)	To assess women's prospective acceptability of receiving cancer screening advice	Seven dimensions of TFA	Cancer screening advice	Cross-sectional online survey
(Toomey et al., 2021)	To prospectively explore HCP’s opinions on the acceptability of delivering interventions to promote healthy infant feeding behaviours	TFA components except ‘intervention coherence’ was not mapped	Health promotion delivery	Qualitative (semi-structured telephone interviews)
(Groarke et al., 2021)	To assess the acceptability of an mHealth behaviour change intervention for cancer survivors with a BMI of 25 or higher and gather constructive feedback	TFA components except ‘Opportunity costs’ and ‘Ethicality’	Mobile health (mHealth) for cancer survivors with obesity	Qualitative (used to inform a topic guide) & Quantitative

2.7 Proposed Research Framework

The research framework shown in Figure 2.3 below illustrates the two fundamental constructs of this study which are knowledge and acceptance. These constructs form the foundation for exploring medical doctors' knowledge and acceptance of TCM and TIM in managing menopausal symptoms in Malaysia.

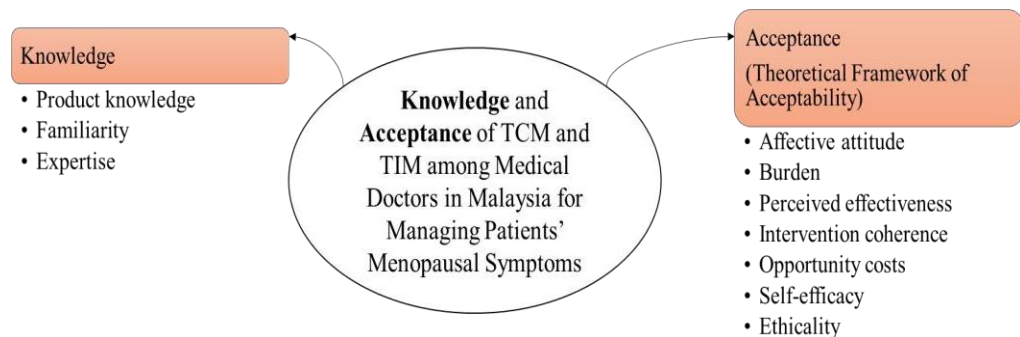


Figure 2.3 Research Framework

Sources:

Philippe, A., & Ngobo, P.-V. (1999). Assessment of consumer knowledge and its consequences: A multi-component approach. *ACR North American Advances*.

Sekhon, M. (2017). *Acceptability of healthcare interventions* City, Universtiy of London].

2.6.1 Knowledge

Knowledge in this study refers to the depth of information and understanding that medical doctors possess regarding TCM and TIM treatments. This includes product knowledge such as awareness of principles, benefits, and potential applications, as well as familiarity gained through experiences, and expertise through education, clinical experience, or exposure to patients using these modalities. Previous studies suggest that greater knowledge of T&CM practices not only shapes perceptions but also supports appropriate clinical decision-making (Hatta et al., 2018). Thus, enhancing knowledge through educational interventions is important for supporting medical doctors' ability to consider TCM and TIM as part of patient care.

2.6.2 Acceptance (Theoretical Framework of Acceptability-TFA)

Acceptance in this study is guided by the Theoretical Framework of Acceptability (TFA), which includes seven dimensions: affective attitude, burden, ethicality, intervention coherence, opportunity costs, perceived effectiveness, and self-efficacy (Sekhon, 2017; Sekhon et al., 2017, 2022). These dimensions help explain whether medical doctors consider TCM and TIM to be appropriate and relevant in clinical practice, and the reasons behind their acceptance or hesitancy. For example, perceived effectiveness and self-efficacy relate to doctors' confidence in recommending such treatments, while

ethicality and opportunity costs reflect the compatibility of TCM and TIM with professional values and practical constraints.

Together, knowledge and acceptance provide a comprehensive framework for examining Malaysians medical doctors' knowledge and acceptance of TCM and TIM in the management of patients' menopausal symptoms. This framework also guided the design of the research instruments (interview questions) and the analysis of study findings.

Although this study adopts qualitative design, the proposed research framework is not intended to serve as a predictive model with predetermined hypotheses, as is common in quantitative research. Instead, it functions as a conceptual guide to structure the exploration of medical doctors' knowledge and acceptance. The framework was developed based on the literature review and highlights the two main constructs of interest: knowledge and acceptance. These constructs provided a foundation for designing the interview guide and for organizing the analysis. While themes were allowed to emerge inductively from the data, then the data was also analysed deductively to link the findings back to the theoretical constructs. The framework therefore serves as a point of reference, ensuring that the study remains theoretically informed while maintaining the flexibility that characterizes qualitative inquiry.

2.7 Chapter Summary

This chapter provided a comprehensive review of the existing literature on T&CM, focusing on TCM and TIM in the context of menopausal symptom management. It explored the historical of T&CM, concept of T&CM in Malaysia, and Malaysia government policies towards T&CM practices, emphasizing its growing role in healthcare. Additionally, the chapter discussed menopause, highlighting the potential of TCM and TIM in addressing menopausal symptoms and the perspectives of medical doctors regarding their integration into conventional medicine. The chapter also explored the impact of educational interventions on medical doctors' acceptance of TCM/TIM and introduced key knowledge constructs such as product knowledge, familiarity, and expertise, while acceptance was applied with seven components of Theoretical Framework of Acceptability (TFA) as a topic guide for development of research instruments. A proposed research framework was presented, presenting the components of knowledge and acceptance of TCM or TIM among medical doctors' in managing patients' menopausal symptoms in Malaysia.

CHAPTER 3

RESEARCH METHODOLOGY

3.0 Chapter Overview

This chapter discusses the methodology used to conduct this study. Section 3.1 discusses the preliminary study that was conducted to refine the research instruments and procedures. Section 3.2 explains the research design to be applied in this study. Section 3.3 described the research instruments used for data collection. Section 3.4 outlines the expert validation process to ensure the appropriateness of the research tool. Section 3.5 presents the sampling design, detailing how participants were selected, including subsection 3.5.1, which describes the sample size. Section 3.6 explains the interventional seminar conducted in this study, with subsection 3.6.1 detailing the post-intervention Google form questions used to ensure the participation of seminar. Section 3.7 discusses the validity and reliability of the qualitative data that will be collected in this study. Section 3.8 elaborates on the data collection procedure. Section 3.9 focuses on the data analysis methods and the software used to analyse the collected data. Section 3.10 describes the ethical considerations, including steps taken to protect participant rights and confidentiality. Finally, Section 3.11 provides a conclusion that summarizes the methodological approach taken in this research.

3.1 Preliminary

Pilot study is a crucial part of a research design that helps enhance the reliability and validity of a study (Gudmundsdottir & Brock-Utne, 2010; Van Teijlingen & Hundley, 2001). It serves as a practice run for testing research instruments before the actual study begins (Abd Gani et al., 2020). In this research, a pilot test was conducted to identify any potential issues or weaknesses in the research instruments, allowing for early adjustments that save time, money, and effort (Dikko, 2016; Watson et al., 2007). It also helps refine the methodology (Van Wijk & Harrison, 2013), and ensures the actual study runs smoothly and meets validity standards (Abd Gani et al., 2020).

Importantly, the purpose of a pilot study is not just to simply mention it was done; but to assess and improve procedures or modify questions that may not yield meaningful or obtain rich data (Gudmundsdottir & Brock-Utne, 2010). In this study, 10 participants were involved in the pilot test (Hill, 1998) through qualitative interviews. Prior to the pilot test, the research instrument was reviewed and validated by experts, allowing researchers to test and adjust interview questions, techniques, and procedures. As pilot study involves a smaller sample size, the reliability of the findings may not be as strong as in the actual study, therefore this suggests that participants from the pilot study should not be included in the main study to avoid biased results due to prior exposure (Muasya & Mulwa, 2023). Overall, conducting a preliminary study and testing the reliability of the interview questions are essential steps in preparing for the main study.

3.2 Research Design and study setting

A qualitative phenomenological research approach was applied in this study with an interventional seminar. Qualitative research has increasingly been used across various fields, either alone or with quantitative methods, to analyse verbal data from observations or interviews, unlike quantitative research, which statistically processes numerical data (Im et al., 2023). Healthcare researchers often use qualitative methods which involve collecting and analysing non-numerical data, such as interviews, observations, and documents, where this approach helps to understand the reasons behind the health behaviours such that by exploring the lived experiences, uncover hidden needs, inform the development of better interventions, and even lead to new theories about health behaviours (Renjith et al., 2021).

Phenomenological design was employed in this study. According to Husserl and Moran (2012) explained that phenomenology explores the deeper logic behind people's experiences. The research begins with specific phenomenon and examining by interpreting the personal experiences of individuals or groups, researchers can uncover common themes and develop meaningful insights (Cresswell, 2013; Husserl & Moran, 2012; Sarfo et al., 2021). Since phenomenological research relies on rich, detailed data, researchers often conduct in-depth interviews with participants. This qualitative phenomenological research approach is well-suited for exploring medical

doctors' acceptance and knowledge of TCM and TIM in managing patient's menopausal symptoms. Through this design, one-on-one online interviews were conducted to gain deeper insights into their experience, perspectives, and the challenges they face in incorporating TCM/TIM into their medical practices.

3.3 Research Instrument (Interviews Questions)

The interviews focused on the current knowledge and acceptance of T&CM among medical doctors in Malaysia. Knowledge constructs were measured based on the typology of consumer knowledge from Philippe and Ngobo (1999). Briefly, a medical doctor's knowledge was assessed based on their familiarity, product knowledge, and expertise. Familiarity referred to the medical doctor's consumption experiences; product knowledge was categorized into declarative and procedural knowledge, while expertise referred to one's perceived ability to perform product-related tasks.

Meanwhile, the acceptance of TCM and TIM among medical doctors was studied based on the Theoretical Framework of Acceptability (TFA) introduced by (Sekhon, 2017; Sekhon et al., 2017), which was used as the interview topic guide to design the questionnaire. This framework, generally applied in healthcare settings and interventions, consisted of seven components: affective attitude, burden, ethicality, intervention coherence, opportunity costs, perceived effectiveness, and self-efficacy (Sekhon, 2017; Sekhon et al., 2017). These components helped identify aspects of treatments that could be improved.

Participants were required to explain the underlying reasons behind their level of T&CM acceptance.

The finalized research instrument (Refer Appendix A) was submitted for approval by the UTAR Ethical Clearance Committee before being used for fieldwork. After receiving ethical approval, the research instrument was sent for expert validation.

3.4 Expert Validation

The validation process of information collection instruments, known as expert judgment, involves a qualified professional thoroughly reviewing the instrument, including an evaluation of each item or question for its coherence, relevance, independence, and potential impact (Pino et al., 2023). It is generally recommended to select an odd number of experts, which preferably three or more who possess strong subject knowledge, research experience, and the ability to assess the instrument objectively to ensure credible and reliable validation (Pino et al., 2023). Therefore, in this study, a panel of five experts (three TCM experts and two TIM experts) were involved, and a validation sheet was prepared in which the experts issued the respective judgment (Refer Appendix B). Expert validation is carried out by allowing experts to provide valuable feedback on the clarity and appropriateness of the questions, ensuring that the instrument is well-suited for the research context and capable of collecting meaningful and reliable data (Pino et al., 2023). In this study, experts

reviewed the instrument based on ten criteria, including the correct use of domain, instrument format, clarity of the meaning of each item, language compatibility, appropriate font size, clarity of instructions received, use of text spacing, indications for measurement scales, clarity of instrument objectives, and correct spelling (Refer Appendix B). The TCM and TIM experts provided insights into the relevance and accuracy of questions related to TCM and TIM practices and concepts, respectively. Experts provided detailed feedback on each question and suggestions for improvement. Based on the feedback, the research instrument was revised to address any identified issues. Once the instrument was validated and amended based on expert feedback, it was finalized and prepared for fieldwork. Table 3. 1 showed expert information for the validity of the research instrument.

Table 3. 1 Expert Information for the Validity of the Research Instrument

No.	Name	Rank	University	Specialty
1	Expert 1	Ayurveda Practitioner	Hospital Universiti Tunku Abdul Rahman (Hospital UTAR)	Ayurveda
2	Expert 2	Principal Ayurveda Consultant	Universiti Tunku Abdul Rahman (UTAR)	Ayurveda
3	Expert 3	Associate Professor	Universiti Tunku Abdul Rahman (UTAR)	Patient Safety Culture, Traditional Chinese Medicine (TCM)
4	Expert 4	Assistant Professor	Universiti Tunku Abdul Rahman (UTAR)	Traditional Chinese Medicine (TCM)
5	Expert 5	Assistant Professor	Universiti Tunku Abdul Rahman (UTAR)	Traditional Chinese Medicine (TCM)

Source: Developed for current research

3.5 Sampling Design

Qualitative research commonly utilized non-probability sampling techniques such as purposive sampling, convenience sampling, snowball sampling, intensity sampling (Renjith et al., 2021). In this study, the participants were recruited using purposive sampling technique or purposeful sampling technique to select medical doctors (family medicine, internal medicine, obstetrics, and gynaecology) who meet the inclusion criteria, specifically those currently practising in Malaysia to enhance the credibility. Meanwhile, the initial group of medical doctors that fulfilled the criteria then referred to and identified other potential participants for the study. This process continues until data saturation was reached.

Inclusion criteria: The participants of this study are Malaysian medical doctors actively employed in either public or private healthcare facilities. This includes medical doctors despite their (prior) experiences with T&CM currently practising in Malaysia. Within the category of doctors, participants will include those with diverse specialties, such as General Paediatrician, Obstetricians and Gynaecologists, Family Medicine Specialists, Internal Medicine Specialists. All participants must be registered with the Malaysian Medical Council (MMC) and the National Specialist Register (NSR) in their respective specialties and must hold a valid Annual Practising Certificate (APC).

Exclusion criteria: Participants who are not Malaysian citizens will be excluded from this study to ensure that the findings are directly applicable to the

Malaysian context as due to different countries may have different healthcare systems, cultural beliefs, and regulations regarding T&CM treatments on menopausal symptoms. The medical students, interns, trainees who have not completed their full certification as doctors are excluded. Those who have retired are not eligible for consideration as they might not be aware of the current healthcare practice.

3.5.1 Sample Size

Unlike quantitative research, which aims to represent an entire population with statistics, qualitative research focused on gathering a rich variety of perspectives from participants. Thus, qualitative studies typically involved fewer participants than quantitative studies. According to Renjith et al. (2021), qualitative research did not rely on a pre-set sample size; instead, data collection continued until data saturation was reached, meaning data was collected until no new information or themes were explored. Saturation is a key concept in qualitative research which was normally used to determine the research sample size (Mason, 2010). In the context of phenomenology, data saturation defined as ‘information redundancy’ or refers to the point at which no new insights emerge from data collection, ensuring a comprehensive understanding of participants’ lived experiences (Ahmed, 2025; Braun & Clarke, 2021). This concept is crucial for achieving methodological rigor, as it enhances the credibility and validity of qualitative findings (Ahmed, 2025; Guest et al., 2006).

When determining sample sizes in qualitative research, Guetterman (2015) found that educational studies typically include eight to thirty-one participants, with an average of fifteen, while health studies range from eight to fifty-two, with an average of twenty-five. Similarly, Cresswell (2013) recommends anywhere between five and twenty-five participants. Despite the smaller sample sizes are common in phenomenological research and suggested sample size of 25 participants, the researcher conducted interviews until data saturation was met (Hennink & Kaiser, 2022). All participants were randomly selected, and written consent was obtained from each participant before the interview (Refer Appendix C). In this study, although data saturation was reached by the 20th participant, as no new themes or insights were emerging, the recruitment continue up to 25 participants to enhance the perspectives particularly to fulfil the context field of managing menopausal symptoms, by including more obstetrics and gynaecology (O&G) specialists and family medicine doctors since they are usually the first approach to menopausal women. This allowed for more relevant insights into menopause clinical settings.

3.6 Interventional Seminar

In this study, the interventional seminar aimed to enhance medical doctors' knowledge of TCM and TIM treatments for menopausal symptoms. This seminar focused on introducing the types of modalities used by TCM and TIM, along with their concepts, principles and historical development in menopausal

symptoms management. The intervention consisted of a single 2-hour online session conducted live, with a recording made available for later viewing. This seminar was crucial in enhancing medical doctors' knowledge and acceptance of TCM and TIM in relieving menopausal symptoms, which could improve health outcomes for menopausal women by fostering a holistic approach to treatment among medical doctors.

The expected short-term outcomes of the intervention included an immediate increase in knowledge and a more positive attitude towards T&CM among participants, which was a 3-day workshop followed by an immediate post-program survey completed before participants left the venue (Wong et al., 2019). However, in our current study assessed these outcomes through post-intervention interviews conducted approximately one week after the seminar. This delayed follow-up allowed participants time to reflect on the information received and accommodated scheduling for those unable to attend the live session.

The interventional seminar was proposed to provide the knowledge of TCM and TIM treatments options to medical doctors, thereby improving the confidence of medical doctors in recommending these traditional modalities to menopausal patients. Gao et al. (2012) demonstrated that knowledge and attitude of subjects had significantly improved (85% to 90%) after conducting an interventional program (30 minutes lecture and 15 minutes videos). Similarly, Zamri et al. (2020) found that awareness can be raised through education, like seminars and information-sharing among participants. Chatterjee et al. (2022) further

supported this by showing educational programs significantly improved knowledge and attitude with subjects' ability to identify the correct ways of transmission of HIV increased by 100%.

This interventional seminar was delivered by TCM and TIM practitioners (Refer Table 3.2 for details of TCM and TIM experts who delivered the educational seminar) from the UTAR Hospital T&CM Centre and involved providing comprehensive information on the efficacy, benefits, and application of TCM and TIM in managing menopausal symptoms. By engaging medical doctors in an informative session, the study aimed to address gaps in knowledge and acceptance of T&CM practices as alternative treatment options for managing menopausal symptoms. The interventional online seminar included experts' presentations, and interactive discussions to foster knowledge of TCM and TIM among medical doctors. Web-based educational interventions are cost-effective, easy to implement, adaptable, and accessible to healthcare professionals. They have been shown to be effective for various medical topics and in improving healthcare professionals' knowledge of evidence-based practice (Krnjic Martinic et al., 2022; Ngim et al., 2019; Shuval et al., 2007; Varnell et al., 2008). This initiative was expected to improve the knowledge and willingness of medical doctors to recommend and incorporate these traditional treatments into their conventional practice, leading to more holistic and patient-centred care for menopausal women. Hence, the intervention in the present study aligned with evidence from the literature to enhance knowledge and acceptance among medical doctors toward TCM and TIM for managing menopausal symptoms.

The two-hour seminar was divided into two equal one-hour segments, each delivered by an accredited practitioner from the UTAR Hospital T&CM Centre. The TCM segment was delivered by Ms. Goh Wui Yee (TCM Practitioner, UTAR T&CM Centre). The session began with an introduction to the classical TCM text Huangdi Neijing (黄帝内经) as the foundational framework for understanding menopausal syndrome. Key theoretical concepts covered included: Yin-Yang (阴阳) imbalance and the decline of Kidney Qi as the primary TCM aetiological understanding of menopause; the role of the Five Elements (Wood, Fire, Earth, Metal, Water) in relation to menopausal symptom patterns; Qi obstruction and its contribution to symptoms; and the roles of Liver, Kidney, Heart, and Spleen disharmony in the menopausal transition. Treatment principles and modalities were then presented, including herbal medicine, with specific formulas Liu Wei Di Huang Wan (六味地黄丸) for nourishing Yin and tonifying Kidney essence, and Er Xian Tang (二仙汤) for clearing heat and alleviating hot flushes and night sweats; acupuncture, targeting meridian regulation for hot flushes, insomnia, mood swings, anxiety, and vaginal dryness; Tuina therapy and Moxibustion for circulation and symptom relief; and Qigong and Tai Chi as gentle movement practices for promoting hormonal balance and overall well-being. Dietary and lifestyle recommendations specific to menopause were also discussed.

The TIM segment was delivered by Dr. Siby Chiramel (Principal Ayurveda Practitioner, UTAR T&CM Centre, Kampar). The session began with the Ayurvedic understanding of menopause, termed Rajonivrutti in classical

Ayurvedic texts including the Ashtanga Hridayam and Charaka Samhitha, defined as the natural cessation of menstruation arising from aging, Dhatukshaya (tissue depletion), and Dosha imbalance. Two types of Rajonivrutti were explained: Kalaja Rajonivrutti, occurring naturally at around 50 years of age, and Akalaja Rajonivrutti, occurring prematurely or beyond the expected age. The three dosha-specific symptom patterns were then presented in detail: Vata dominant presentation, characterised by vaginal dryness, cold extremities, sleep disturbance, anxiety, palpitations, and constipation; Pitta dominant presentation, characterised by intense hot flushes, night sweats, irritability, heavy periods with burning sensation, and skin rashes; and Kapha dominant presentation, characterised by weight gain, lethargy, depression, and fluid retention. Management approaches covered included dosha-specific dietary and lifestyle modifications; Samshamana therapy; Panchakarma treatments including Abhyanga, Shirodhara, Mridu Virechana, and Vasti; Sattvavjaya Chikitsa (counselling and reassurance); Yoga therapy including Pranayama (Sheetali and Ujjayi); and Rasayana therapy, with emphasis on Triphala, Ashwagandha (*Withania somnifera*) for controlling vasomotor symptoms, and Yasthimadhu (*Glycyrrhiza glabra*) as an antioxidant and adaptogen. Both sessions concluded with interactive question-and-answer discussions with the participating medical doctors.

However, to ensure participation in this interventional seminar and/or watch the recording, pre-reminders of the online interventional seminar will be sent through email, and WhatsApp, helping participants remember the event and reinforce their commitment to attend. Besides, scheduling online seminars at

convenient times, such as during lunch breaks can enhance participation by accommodating participants' schedules.

Table 3.2 Profile of Traditional Indian Medicine and Traditional Chinese Medicine Practitioners Delivering the Interventional Seminar

Details	Dr. Siby Chiramel TIM Practitioner	Ms. Goh Wui Yee TCM Practitioner
Area of Expertise	Ayurveda	TCM Internal Medicine & Gynecology
Qualification	Bachelor of Ayurvedic Medicine and Surgery (1988), Madras University	Bachelor of Traditional Chinese Medicine (2013), Shanghai University of Traditional Chinese
Experience	- Jeevana Ayurveda Hospital, Coimbatore - Nayar Samaj Ayurveda Centre, Mumbai - Ayur Centre Sdn Bhd, Kuala Lumpur, Malaysia (Chief Ayurvedic Physician since 2000) - Saranya Ayurveda Hospital and Vaidyagrāma, Coimbatore, Tamil Nadu, India (Senior Medical Consultant) - Current: T&CM Centre, Hospital Universiti Tunku Abdul Rahman, Kampar	- Yueyang Hospital, Shanghai University of Traditional Chinese Medicine, China - Perak Choong Wah Clinic, Ipoh - Current: T&CM Centre, Hospital Universiti Tunku Abdul Rahman, Kampar
Awards	- 'Ambassador of Peace' by the Universal Peace Federation (2014) - 'Best Ayurveda Physician and Wellness Catalyst of the Year' by the Ministry of Tourism, Malaysia, and Yoga Life (2020) - Listed among the most successful people in Malaysia by British Media Publication House	
Membership	- Traditional and Complementary Medicine Council, Ministry of Health, Malaysia - Member of Malaysian	- Member, Malaysia Chinese Medicine Association - Member, Tzu Chi

Quality Accreditation (MQA) Council - Chairman, Centre for Spiritual Advancement - Advisor, Sandhyamarga Holistic Academy, Malaysia	International Medical Association (TIMA)
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Source: Developed for current research

3.6.1 Intervention Assessment (Google Form Questions)

Following the interventional seminar, an intervention Google Form was developed to assess the impact of the session on participants' knowledge toward TCM and TIM in the management of menopausal symptoms. The questions in the form were derived from the content delivered during the educational online seminar sessions.

The design of the form was informed by key discussion points, and treatment modalities presented by the TCM and TIM practitioners from the UTAR Hospital T&CM Centre. This made sure that the questions matched what was taught during the seminar. It also meant that the answers to the questions could be clearly confirmed using the information given by the experts. This helped make sure the questions were correct and reliable.

Additionally, this could help participants recall and reflect on what they had learned. This approach helped to encourage active participation, validate the effectiveness of the seminar, and collect meaningful data on changes in knowledge or acceptance of TCM and TIM in managing patient's menopausal

symptoms.

To further support participation, the Google Form was distributed promptly after the seminar through multiple channels, including email and WhatsApp, ensuring it was accessible and convenient for the medical doctors involved. By linking the content of the form to the expert-delivered seminar, the study strengthened the reliability of its post-intervention assessment and maximized participant engagement by confirming the participants have viewed the content delivered by TCM and TIM experts. Data analysis for Post-Seminar Questions was analysed (Refer Section 4.4 Intervention- Post Seminar Questions).

This assessment consisted of eight questions (including objectives and subjective questions), four related to TCM and four related to TIM. Each correct answer was awarded one point, where the maximum possible score of eight. The scores were analysed using descriptive statistics to assess the overall level of understanding towards TCM and TIM in managing menopausal symptoms after the seminar. Measures of central tendency (mean, mode, and median) and measures of dispersion (standard deviation, range) were calculated to determine the general performance trends and consistency across participants. The mean (average) represented the central tendency by including all participants score in the dataset. This makes it useful for identifying the general performance of participants. However, median and mode were more represented if such cases like outliers or skewed data happened, as the mean can be influenced by outliers or skewed data. Median (middle score) and mode (the most common score among participants) which supports the reliability of the mean by confirming

that most of the participants scored close to the central value. The standard deviation was applied where it is a way of showing how spread out the scores such that whether scores are closely grouped together (low standard deviation) or spread out (high standard deviation). The range shows the spread of the scores in the simplest way where subtracts the lowest score from the highest score.

3.7 Validity and Reliability

Validity and reliability of the data were the main concern when utilizing qualitative approach in a research study. Credibility, applicability, dependability, and confirmability are considered the qualitative counterparts to the quantitative concepts of internal validity, external validity, reliability, and objectivity (Lincoln & Guba, 1985; Walters, 2016). According to Dikko (2016), an instrument was considered effective when the data collected met the criteria for validity and reliability.

According to Zohrabi (2013), validity referred to the trustworthiness and accuracy of the research, ensuring that the study measured what it intended to measure. For example, regarding content validity, experts in the research field reviewed the research instruments and data, and based on their feedback, unclear and ambiguous questions were revised (Zohrabi, 2013). Therefore, the quality of the interview instrument was crucial, as the research findings relied on the data gathered from the research instrument.

According to Coleman (2022), there were various validity techniques that could be employed to ensure the rigor of the investigation. In this research, the validity strategies were as follows:

- i. **Recording and replicability** (Coleman, 2022): Researchers employed audio or video recording devices instead of relying solely on their notes, allowing for the thorough examination of raw data. In this study, the interview sessions were conducted online via Microsoft Teams, and the sessions were recorded with full transcription. This enhanced procedural trustworthiness when interviews were utilized as a method for data collection, thereby improving validity in this type of research study.
- ii. **Member checking and respondent validation** (Coleman, 2022): During interviews, researchers asking for additional clarification when respondent statements were unclear. This approach provided interviewees with a chance to validate or amend the interviewer's understanding of their statements. Meanwhile, in terms of respondent validation, interviewees were given the opportunity to review and revise their transcribed interview records and the summary findings of the overall interviews.

Reliability referred to the consistency and dependability of the data collected in the study (Abd Gani et al., 2020). In qualitative research, where data were often subjective and narrative, ensuring reliability could be challenging. Therefore, researchers needed to ensure that the data collection and analysis processes were consistent and replicable. In this research, the reliability strategies were as follows:

- i. **Ensuring transcripts are free from mistakes:** Carefully reviewed and corrected any errors in the transcriptions to maintain the integrity of the data.
- ii. **Avoiding drift in the definition of codes:** Established clear and consistent definitions for coding categories and maintained them throughout the data analysis process. This prevented changes in the interpretation of codes over time.
- iii. **Cross-checking codes developed by different researchers:** The initial coding of several transcripts was performed independently by two researchers, coding outcomes were then compared and discussed. The final codings and themes development were involved with three researchers cross-checked the work to ensure consistency. This approach helped minimize individual biases and enhanced the reliability of the findings.

- iv. **Triangulation:** The involvement of multiple researchers across coding and theme development constitutes investigator triangulation, which strengthens credibility by bringing different perspectives and reducing individual researcher bias (Carter, 2014). Additionally, data source triangulation was achieved through the purposive recruitment of medical doctors from three distinct clinical specialties, namely internal medicine, family medicine, and obstetrics and gynaecology, ensuring diverse professional perspectives on the phenomenon of interest (Carter, 2014).
- v. **Controlling bias in coding:** To reduce bias, more than one researcher discussed the coding until everyone agreed. The researchers also kept reflexive notes to record their thoughts, assumptions, and decisions during the process.
- vi. **Type of coding used:** Thematic analysis (Clarke & Braun, 2014) was applied, using a combination of inductive and deductive coding. Inductive coding enabled themes to emerge directly from the data, while deductive coding was guided by the study objectives and relevant literature. This hybrid inductive-deductive approach ensured openness to unanticipated findings while maintaining alignment with the research aims.

In qualitative phenomenological research, it is not essential to conduct the inter-coder reliability and validation because it is not always useful to force to reach consensus as this might cause hide those diverse perspectives, thereby reducing the richness of the data (Endacott, 2005). According to a review study by Cheung and Tai (2023) showed that the majority of qualitative studies (81.6%) did not report conducting intercoder reliability tests. The authors noted that many qualitative researchers prefer to use alternative strategies to enhance reliability, rather than relying on statistical agreement measures. The authors also clarified that only a small proportion of studies specifically case studies (8.7%) and mixed-method studies (5.8%) reported including intercoder reliability tests in their data analysis. Based on the study revealed that most studies using phenomenology do not incorporate intercoder reliability statistics with the reason of the goal of phenomenological study is to capture people's lived experiences as honestly and deeply as possible, it is more important to explore and reflect on these different interpretations than to simply reaching statistical agreement (Cheung & Tai, 2023; Endacott, 2005; McDonald et al., 2019).

In line with this, reflexivity was maintained throughout the research process to ensure credibility and trustworthiness (Braun & Clarke, 2006). The research team comprised a postgraduate student and three academic supervisors holding doctoral qualifications in public health, healthcare, and qualitative analysis, all affiliated with Universiti Tunku Abdul Rahman. The team possessed prior experience in qualitative research and had undergone training in conducting in-depth one-on-one interviews and thematic analysis. No prior relationships were

established between the researcher and participants before the study commenced, reducing the risk of relational bias influencing participant responses. Prior to each interview, participants were provided with a consent sheet containing research information that explained the nature, scope, and aims of the study, ensuring informed participation. Participants were made aware that the research team comprised a postgraduate student and academic staff from UTAR, which helped establish transparency regarding researcher identity and institutional affiliation. The principal researcher maintained a neutral stance throughout all interviews to minimise bias and allow participants to express their opinions and experiences freely. Interview questions were framed neutrally, validated by five experts, and piloted through preliminary interviews prior to the actual study to further reduce the risk of leading participants. Supervisors reviewed interview sessions to ensure consistency and appropriateness of interviewing technique. Together with member checking, respondent validation, and multi-researcher coding described above, these reflexive practices ensured that the full diversity of participant perspectives was preserved, including those expressing scepticism, neutrality, or resistance toward TCM and TIM integration (Braun and Clarke, 2006; Carter, 2014) (Braun & Clarke, 2006; Carter, 2014).

3.8 Data Collection Procedure

The participants were selected based on their eligibility, and their participation was confirmed for the interview via email, WhatsApp, or phone call. An appointment for one-to-one online interview was then arranged. The pre- and post- intervention one-to-one interviews with the 25 selected medical doctors were conducted online via Microsoft Teams or Webex platforms which enable flexible participation without travel or related expenses. This approach minimized time consumption and eliminated expenses related to travel, venue rental, and accommodation. Additionally, online platforms provided flexibility in scheduling interviews, accommodating the busy schedules of medical doctors, and increasing overall cooperation.

The interviews were conducted in English, with occasional use of Bahasa Melayu, Tamil, and Chinese, particularly when discussing the names of herbs or treatments and were recorded using Microsoft Teams. Each interview lasted between 40 to 60 minutes, depending on the cooperation of the interviewees. To ensure quality and consistency in the data collection process, initially the interviews were conducted under the direct guidance of the supervisors. This allowed the Master student to gain practical guidance on interviewing techniques, probing strategies, and appropriate handling of participant responses. After this supervised phase, the remaining interviews were conducted independently by the Master student, and the interviews were then reviewed and evaluated by the supervisors to ensure the appropriateness and consistency during the interview's sessions. This progressive approach ensured

both methodological rigour and the student's development of research competence. Recording each session to ensure an accurate capture of all participants' responses, enabling the interviewer to focus on the conversation. Notes were also taken during the interviews to provide quick reference for key points.

PHASE 1: Initially, one-on-one online interviews were conducted to understand medical doctors' acceptance of T&CM and the underlying reasons for (not) recommending TCM/TIM as a treatment option for managing menopausal symptoms. The existing knowledge of TCM/TIM among medical doctors was also assessed during this initial cycle.

PHASE 2: Upon completing the first cycle of interviews, the participants were exposed to T&CM through an interventional seminar conducted by certified TCM and TIM practitioners from UTAR T&CM Centre. The seminar was conducted online to enhance participation among both speakers and participants. The online seminar lasted for 2 hours (a 1-hour TCM talk followed by a 1-hour TIM talk), including a Q&A session. It was recorded to accommodate participants (medical doctors) who were unable to attend the live session. This intervention aimed to provide participants with concepts or principles information and insights into TCM and TIM treatments for managing menopausal symptoms. To ensure participation, participants were required to answer Google form questions based on the seminar content, confirming their attendance.

PHASE 3: The intervention was followed by the second cycle of interviews. After participating in the intervention, the participants were interviewed again using the same interview protocol to assess the impact of the acceptance and knowledge gained from the online seminar hosted by the TCM and TIM practitioners. The follow-up online interviews were conducted within two months after the medical doctors attended the interventional seminar. Upon completing the second round of interviews, participants received an RM 250 token as a token of appreciation.

The overall data collection process was conducted between September 2024 and early December 2024. The first cycle of pre-intervention interviews was carried out in September 2024. The intervention seminar was conducted online on 18 October 2024 followed by the second cycle which was post-intervention interviews were then completed between 26 October through November 2024 (24 participants), and final interview was completed on 6 December 2024 (1 participant).

3.9 Data Analysis

Before proceeding with data analysis, it was important to ensure that the information was accurately gathered during the online interviews. First, all interview sessions for each participant were recorded to ensure that responses were collected accurately. Recording the interviews allowed the researcher to focus on the conversation without concerns about missing important

information or details. In addition to recording, notes were taken during the interviews to serve as quick references for key points and insights. After completing the interviews, the recordings were transcribed. Data analysis began with the transcription of the interview data, where transcription involved converting the recorded interviews into written text. This process was essential for maintaining a clear and accurate record of each respondent's conversation, facilitating easier data analysis in the subsequent procedures. Therefore, the researcher carefully read through the data to gain a deeper understanding (Renjith et al., 2021). In this study, all interview recordings were transcribed verbatim in Bahasa Melayu, Tamil and Chinese then translated into English. The transcripts were manually coded, and themes were identified. These themes were reviewed to ensure they accurately represented the data. The information was organized into various categories for analysis.

Thematic analysis was employed to uncover important patterns, themes, and insights within qualitative data sources such as videos, audio recordings, and textual transcripts where it was a common and powerful tool in qualitative research. Braun and Clarke (2006) described thematic analysis as a tool aimed at discovering and analysing patterns within qualitative data to derive meaning from it. It was then defined as a set of analytic approaches used to uncover patterns of meaning across a qualitative dataset (Braun et al., 2016). There are six (6) steps of thematic analysis including familiarising with the data collected, generate initial codes, search for themes, review themes, define and name the themes, and last produce the report (Braun & Clarke, 2006).

In this study, a hybrid thematic analysis approach was applied, combining inductive and deductive approach (Proudfoot, 2023; Rees et al., 2023). The inductive element allowed themes to emerge organically from participants' responses without being restricted by pre-existing theoretical framework, ensuring authentic representation of their perspectives. The deductive phase, guided by the study's theoretical framework, research questions, and concepts identified in the literature, occurred later in the process when the inductively generated themes were compared and matched with relevant theoretical perspectives and prior findings (Rees et al., 2023). This hybrid approach enhanced both the richness and the rigour of the analysis.

Following Braun and Clarke (2006) six-step framework, in the first phase, known as data familiarization, the researcher transcribed and reviewed the data to gain initial insights. This involved reading and re-reading the transcripts to develop a deep understanding of the participants' perspectives. For Phase 2 was generating initial codes after familiarising with the data, in this phase key points were identified, and initial codes were generated using Atlas.ti software (Braun & Clarke, 2006). For Phase 3 were themes searching, the analysis shifted to identifying broader themes by organizing related codes and grouping relevant data extracts. Visual tools like tables and mind maps were used to aid in theme development (Braun & Clarke, 2006).

In addition to Braun and Clarke's method, this study also employed the Thematic Network introduced by Attride-Stirling (2001) as an analytic tool for thematic analysis. This thematic network was used to analyse the pre- and post-

intervention data collected through in-depth interviews with medical doctors. According to Attride-Stirling (2001), themes were organized hierarchically into basic theme, organizing theme, and global theme. Basic theme is a simple, low-level idea derived from the data, but on its own, it offers limited meaning, when grouped with other basic themes, it contributes to forming a more meaningful organizing theme (Attride-Stirling, 2001). An organizing theme is a mid-level concept that groups related basic themes, revealing key patterns and assumptions in the data, and collectively contributes to forming a broader global theme (Attride-Stirling, 2001). A global theme serves as the central main idea that captures the core meaning of multiple organizing themes. They represent a higher level of interpretation and abstraction, allowing the researcher to explore the deeper meaning of the findings. According to Attride-Stirling (2001), global themes form the centre of a thematic network, summarizing the main message or essence of the text. The thematic networks, represented visually as web-like diagrams, illustrate the relationships and connections among basic, organizing, and global themes. Unlike traditional hierarchical models, these networks emphasize the interconnectedness of ideas rather than a ranked order. Importantly, thematic networks serve as a tool for organizing and exploring data, not as the final stage of analysis. They facilitate deeper interpretation and help researchers uncover underlying meanings that may not be immediately visible in the data (Attride-Stirling, 2001).

Besides the use of thematic networks, word clouds were also used as a visual aid. Word clouds offer a quick overview by displaying the most frequently mentioned words in larger, bolder fonts, making it easier to spot recurring

concepts or terms emphasized by participants (DePaolo & Wilkinson, 2014). This visual tool helped the development of organizing and global themes, ensuring that the findings were grounded in participants' actual expressions. Moreover, word clouds helped validate the thematic network analysis by cross verifying that the dominant concepts extracted from the transcripts were also reflected in the frequency of terms used.

Followed by Phase 4 which was the identified themes were reviewed against the full dataset to ensure alignment. The themes were refined, merged, split, or discarded as needed to improve clarity and accuracy. For Phase 5 themes were defined and named to reflect their relevance to the overall data, ensuring clear and concise representation (Braun & Clarke, 2006). Lastly, the researcher presented a detailed analysis of each theme, ensuring a clear, logical, and engaging narrative that accurately conveyed the data's insights (Braun & Clarke, 2006).

Additionally, in terms of software used, qualitative data analysis was traditionally conducted manually or with basic tools such as spreadsheets. Nowadays, software like Atlas.ti, NVivo, and MAXQDA assist researchers in managing and organizing qualitative data, they help structure and interpret unstructured information efficiently (Renjith et al., 2021). In this study, data processing and analysis were facilitated using Atlas.ti 9 software, a widely used qualitative software for organizing, coding, and analysing data efficiently. This software assisted in thematic analysis, making the process easier and more insightful.

3.10 Ethical Consideration

All ethical principles were followed when planning and conducting the research and presenting the results. Due to concerns about the privacy and confidentiality of personal information and participant responses in interviews, participants were given information regarding the purpose of the research study, data retention, and use before the interview session began. Participants were asked for permission to record the interviews, and the recordings were used solely for academic research purposes. The researchers who conducted the data analysis were the only ones with access to the audio/ video recordings and interview transcripts. Additionally, ethical approval was obtained before the collection of research data, and all processes aligned with the Universiti Tunku Abdul Rahman (UTAR) ethics and code of conduct. The study was approved by the UTAR Scientific and Ethical Review Committee, Universiti Tunku Abdul Rahman (U/SERC/56(A)-359/2024). Informed consent (Appendix C) was obtained from all study participants before being interviewed. The study ensured that the anonymity, privacy, and confidentiality of the participants' data were maintained throughout the research. The research was supported by Universiti Tunku Abdul Rahman Research Fund [IPSR/RMC/UTARRF/2023-C1/H01].

3.11 Chapter Summary

This chapter outlined the research methodology applied in this study, including the research design, sampling strategy, data collection procedures, and analytical approaches used to explore medical doctors' knowledge, perceptions, and acceptance of TCM and TIM for managing menopausal symptoms. The study utilized a qualitative phenomenological approach to ensure a comprehensive understanding of the research problems. The interventional seminar played a crucial role in enhancing participants' knowledge and acceptance of TCM and TIM, highlighting the impact of educational interventions on medical doctors' perspectives. Additionally, efforts were made to ensure the validity and reliability of the research instruments, ensuring the study's credibility. Ethical considerations were also carefully addressed to uphold research integrity and participant confidentiality. The next chapter presents the results and discussions based on data analysis.

CHAPTER 4

RESULTS AND DISCUSSIONS

4.0 Chapter Overview

This chapter presents the results and discussions of the study. Section 4.1 discusses the sociodemographic characteristics and professional backgrounds of the participants (medical doctors) involved in this study. Section 4.2 provides a thematic analysis of pre-intervention data, highlighting the initial knowledge and acceptance of the participants on TCM and TIM in patients' menopause care. Section 4.3 presents a detailed discussion of the pre- intervention findings, structured around four key themes: knowledge, perceived effectiveness and suitability, acceptance and professional responsibility, and barriers of integration. Section 4.4 summarizes responses from the intervention assessment (post-seminar questions), followed by Section 4.5 which presents the thematic analysis of post-intervention data. Section 4.6 discusses the post- intervention findings based on the same four themes, allowing for a direct comparison of shifts in knowledge and acceptance. Section 4.7 compares pre- and post-intervention findings according to global themes to identify changes in knowledge, attitudes, acceptance, and perceived challenges. Finally, Section 4.8 concludes the chapter with a summary of key findings and their relevance to the study objectives.

4.1 Sociodemographic characteristics

Based on, a total of 25 medical doctors (n=25) participated in this study. In terms of their professional roles, nearly half were Medical Officers (48.0%), followed by General Practitioners (28.0%), Medical Specialists (20.0%), and Resident Physicians (4.0%). Majority were working in Outpatient Departments (OPD), Maternal and Child Health (MCH), general medical care, and Primary Care settings (44.0%, n=11). Equal numbers of participants were from Obstetrics & Gynaecology, Family Medicine, and Internal Medicine (16.0% each, n=4), while Psychiatry and Men's Health /Women's Health were each represented by one participant (4.0% each, n = 1). In terms of work experience, most participants had 3 to 5 years of experience (48.0%, n=12), followed by more than 10 years (32.0%, n=8), and 6 to 10 years (20.0%, n=5) (Table 4. 1).

Table 4.1 Socio-demographic characteristics and Professionals Information of participants

Variables	No. of Participants	Percentage (%)
Current Position		
Medical Officer	12	48.0
General Practitioner	7	28.0
Resident Physician	1	4.0
Medical Specialist	5	20.0
Specialties/Fields of Practice/ Department		
Obstetrics & Gynaecology	4	16.0
Family Medicine	4	16.0
Internal Medicine	4	16.0
OPD (Outpatient) & MCH (Maternal and Child Health), Medical, Primary Care	11	44.0
Psychiatry	1	4.0
Men Health, STD, Women Health	1	4.0
Years of Experience in Medical Field		
3 to 5 years	12	48.0
6 to 10 years	5	20.0
More than 10 years	8	32.0

Source: Developed for current research

All participants consented to have their interviews recorded (video or audio), and the duration of each interview was recorded. .

Table 4.2 listed the time taken for each participant to complete their first and second online interviews. On average, participants took 47.53 minutes to complete the first online interview and 26.76 minutes to complete the second online interview.

Table 4.2 Time taken for each interview

Participants	Time Taken for First Online Interview (Pre-Intervention)	Time Taken for Second Online Interview (Post-Intervention)
P1	39.37	17.34
P2	47.37	26.08
P3	42.47	37.20
P4	49.10	28.24
P5	37.58	17.01
P6	30.54	25.39
P7	43.08	19.35
P8	33.22	20.40
P9	44.35	20.15
P10	30.49	23.13
P11	58.02	24.30
P12	39.45	16.30
P13	58.11	43.45
P14	68.41	31.52
P15	75.44	32.34
P16	26.51	21.20
P17	101.06	74.06
P18	50.35	20.01
P19	54.25	28.01
P20	39.19	17.03
P21	30.12	17.44
P22	44.57	25.08
P23	49.51	29.11
P24	45.53	28.49
P25	50.28	26.27
Total	1188.37	668.90
Average	47.53	26.76

Source: Developed for the current research

Note: P= Participant

4.2 Thematic Analysis (Pre-intervention)

This study employed the thematic network analysis framework introduced by Attride-Stirling (2001), based on the pre-intervention interview transcripts, 311 basic themes were initially identified from participants' quotations. Table 4.3 displayed these 311 basic themes were systematically refined into 39 first level organizing themes (organizing themes I) and subsequently synthesized into 11 second level organizing themes (organizing themes II). Following this, the organizing themes were then further condensed and abstracted into 4 global themes. In total, 946 quotes were identified during the coding process using Atlas.ti 9 software. This thematic analysis enabled comprehensive exploration of the participants' pre-intervention knowledge, and acceptance toward TCM and TIM, in the context of menopausal symptoms management.

Besides the use of thematic networks, word clouds were also employed as a tool to visually identify prominent term patterns across all interview transcriptions. Based on Figure 4.1 displayed the word cloud for pre-intervention transcripts where the most prominent words are “*medicine,*” “*traditional,*” “*symptoms,*” “*Chinese,*” “*TCM,*” “*menopausal,*” and “*Indian*”.

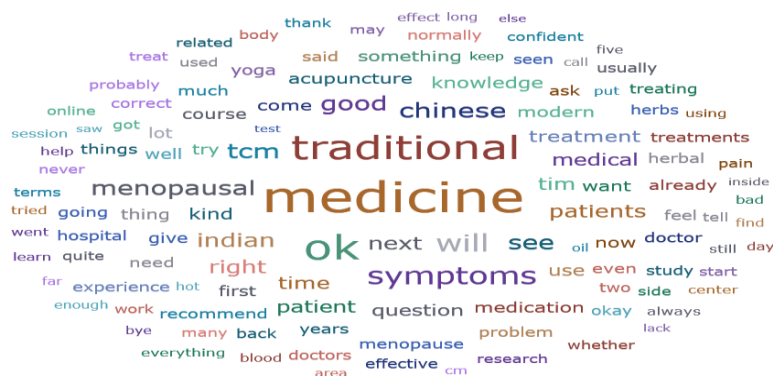


Figure 4. 1 Total Transcribed Word Cloud (Pre-Intervention)

Table 4.3 Thematic Analysis from Basic Themes to Organizing Themes and Global Themes (Pre-Intervention)

No.	Global Themes	Organising Themes I	Organising Themes II	No. Of Quotes	% Total	Basic Themes	No. Of Quotes	% Within Organizing Theme
1	Knowledge and Experience	Knowledge	Development T&CM	24	2.5	A lot	5	21
						More	6	25
						Not aware	7	29
						Slowly	2	8
						Stagnant	2	8
						Strong	2	8
			Concepts/Principle TCM	32	3.4	Counterbalanced	6	19
						Five Elements	2	6
						Yin Yang	24	75
			Concepts/Principle TIM	4	0.4	Vata, Pitta, Kapha	1	25
						Five Elements	3	75
			Types of TCM	98	10.4	Acupuncture	28	29
						Black dates	1	1
						Chinese herbal medicine (CHM)	11	11
						Cupping	11	11
						Dong Quai	5	5
						Ginkgo	3	3
						Ginseng	11	11
						Goji berries	2	2
						Gua Sha	4	4

					Massage	1	1
					Moxibustion	2	2
					Pressure Therapy	1	1
					Qigong	1	1
					Red dates	5	5
					Reflexology	1	1
					Tai Chi	4	4
					Tit Tar	1	1
					Tuina	6	6
	Types of TIM				Aloe Vera	3	8
					Ashwagandha	6	29
					Ayurveda	21	8
					Fenugreek	6	10
					Homeopathy	7	7
		72	7.6		Oil massage	5	1
					Oil therapy	1	1
					Saffron	1	1
					Tamarind	1	10
					Turmeric	7	19
					Yoga	14	24
Limited Knowledge	Limited knowledge of TCM	17	1.8		Not sure	17	100
		17	1.8		Basic	1	6

and Awareness	Don't know			5	29
				6	35
Limited knowledge of TCM & TIM	Lack Layman Superficial Unfamiliar			1	6
				2	12
				2	12
				2	9
				6	27
	Limited knowledge of TIM			1	5
				2	9
				3	14
				4	18
				2	9
Lack awareness TCM/TIM-menopause	Unaware Uncertain Unexplored Unexposed Unversed			1	5
				1	5
				2	25
				4	50
				2	25
	Not well versed Unaware Unexpected			1	7
				3	20
				1	7
				4	27
				2	13
Sources of Information	Formal Education			1	7
				3	20
				1	7
				4	27
				2	13

			TCM module	2	13
			TCM short course	2	13
Informal Understanding	71	7.5	Seen	34	48
			Hearsay	3	4
			Heard	34	48
Social media/Physical influence TCM	28	3.0	Advertisements	2	7
			Facebook	9	32
			Flyers	2	7
			Newspaper	1	4
			Promotions	3	11
			Shop Poster	1	4
			Signboards	1	4
			Tik Tok	5	18
			TV	2	7
			Videos	1	4
			YouTube	1	4
Social media/Physical influence TIM	23	2.4	Advertisement	3	13
			Facebook	5	22
			Instagram	1	4
			Internet	1	4
			Online	1	4
			Promotions	3	13
			Signboard	1	4

			TikTok	4	17
			WhatsApp	1	4
			Yoga everywhere	1	4
			YouTube	2	9
T&CM government hospital	14	1.5	Cheras Rehabilitation Hospital	1	7
			Duchess of Kent Hospital Sabah	1	7
			HKL	1	7
			Hospital Port Dickson	4	29
			Hospital Putrajaya	4	29
			Clinic Kesihatan Kelantan	1	7
			National Cancer Institute Putrajaya	1	7
			Sabah Women and Children Hospital	1	7
			Charity clinic	1	8
			KL Eco City	1	8
TCM centre	13	1.4	Kuchai Lama	1	8
			Residential area	7	54
			Subang Jaya Taipan	1	8
			Tung Shin Hospital	1	8
			Workplace	1	8

Family & Peer Influence	TIM centre			Klang Ayurvedic centre	2	40	
	5	0.5	PJ Ayurveda	1	20		
			PJ Indian centre	1	20		
			Residential area	1	20		
			Family used TIM		12	1.3	COVID pandemic
	Irritable bowel	1	8				
	Menopause	6	50				
	well-being/psychosomatic	4	33				
	Family, friends, patients used TCM		28	3.0	Back pain	5	18
	Body pain	1			4		
	Fracture	3			11		
	GI upset	1			4		
	Joint pain	1			4		
	Knee pain	1			4		
	Post menopause	1			4		
	Neck stiffness	1			4		
	Numbness	1			4		
	Post cancer	1			4		
	Postpartum	1			4		
	Shoulder aches	1			4		
	Sore throat	1			4		
	Stroke	3			11		

			Well-being/psychosomatic	6	21
Personal and Observational Experiences	Observed experiences	32	3.4	Bad	9
				Better	44
				Boost energy	16
				Disasters	3
				Growth	6
				Improved	3
				Ineffective	16
				Successfully	3
	Personal experience on TCM	23	2.4	Confinement	9
				Coughing	4
				Diarrheal	4
				Facial paralysis	9
				Fracture	9
				Heaty	22
				Massage	4
				Muscle pains	4
				Neck stiffness	4
				Period	4
				recur	4
				recurrent	4
				sore throat	4

				sprained	1	4
				urticaria	2	9
			Personal experience on TIM	Acne	1	4
				Asthma	1	4
				Balancing	2	9
				Cough	3	13
				Daily meals	2	9
				Flexibility	3	13
		23	2.4	Flu	2	9
				Menstrual cramps	2	9
				PCOS	1	4
				Relaxation	1	4
				Tried	1	4
				Unpleasant	2	9
				Well-being	2	9
2	Perceived Effectiveness and Suitability	Symptoms and Treatment Preferences	Menopausal Symptoms	Agitation	1	2
				Anxiety	3	5
				Appetite reduce	1	2
		66	7.0	Back pain	1	2
				Body ache	2	3
				Bone pain	1	2
				depression	2	3
				hot flashes	14	21

			insomnia	2	3
			irregular bleeding	4	6
			Lethargic	3	5
			Low sexual drive	2	3
			migraines	1	2
			mood swing	6	9
			muscle pains	1	2
			night sweats	5	8
			osteoporosis	1	2
			palpitation	1	2
			sexual issue	1	2
			sleep difficulty	4	6
			tiredness	2	3
			vaginal dryness	6	9
			weak	1	2
			weight gain	1	2
Recommended T&CM			Acupuncture	1	8
menopause			Ayurveda	1	8
			Black cohosh	2	15
	13	1.4	Herbal Supplement	1	8
			Remifemin	1	8
			Rhizome	2	15
			St. John's wort	3	23

				Yoga	2	15
	Non-invasive treatment			Against	1	10
				Different way	1	10
				Natural source	1	10
		10	1.1	Not Advocate	2	20
				Not invasive	1	10
				Orally	1	10
				Outer part	1	10
				Prefer not	1	10
				Stop	1	10
Treatment Perspectives	Perceived Roles of TCM & TIM			Alternative	8	38
		21	2.2	Complementary	7	33
				Contraindication	2	10
				Symptomatic relief menopause	4	19
	Believe in effectiveness			Believe	6	40
		15	1.6	Help	2	13
				Holistic	5	33
				Potential	1	7
				Suitable	1	7
	Mixed perceptions on effectiveness	18	1.9	Depend on	3	17
				Different	2	11
				Moderate	1	6

					Neutral	1	6	
					Personal respond	1	6	
					Placebo effect	1	6	
					Recur	1	6	
					Suits	1	6	
					Temporary	1	6	
					Uncertainty	1	6	
					Unique	1	6	
					Unsure	3	17	
					Varies	1	6	
3	Acceptance and Professional Responsibility	Attitude	Knowledge-Seeking		Can	4	10	
					Chance	2	5	
					Good	1	3	
					Important	6	15	
					Interested	3	8	
					Join	3	8	
				39	4.1	Learn	3	8
						Opportunity	3	8
						Read	1	3
						Update	2	5
						Upgrade	1	3
						Useful	1	3
						Widen	1	3

				Willing	3	8
				Worth	5	13
	Positive Attitude			Confident	1	3
				Competent Recommend acupuncture	1	3
		31	3.3	No concern	2	6
				Open	24	77
				Strongly/would recommend TCM	2	6
				Strongly recommend TIM	1	3
	Neutral/ Negative Attitude			Deny	1	3
				Ignored	1	3
				Neutral	4	13
				Normal	4	13
		33	3.5	Not confident	10	31
				Not convinced	1	3
				Rare	1	3
				Sceptical menopause	1	3
				Scepticism	8	25
				Uncomfortable	1	3
				Usual	1	3
Professional Responsibility	Confidence in licensed products/practitioner	11	1.2	KKM Facilities	1	9
				Licensed practitioner	1	9

			Proper practitioner	4	36
			Proper Regulations	1	9
			Properly trained	1	9
			Registered products	2	18
			Well established medications	1	9
Evidence-based validation	18	1.9	Certified	1	6
			Credible	1	6
			Data	2	11
			Double-blinded study	1	6
			Evidence	8	44
			Research	2	11
			Robust study	1	6
			Scientific	2	11
Patient autonomy	13	1.4	Autonomy	1	8
			Choice	2	15
			Choose	3	23
			Preference	2	15
			Options	2	15
			Patient centred choice	1	8
			Right	2	15
Referral to gynaecologist	10	1.1	Complex	1	10
			Examination	1	10

					Further assessment	4	40	
					Hormone therapy	2	20	
					O&G department	1	10	
					Supplement	1	10	
4	Barriers of Integration	Safety and Trust Concerns	Concern herbal content		Content	1	7	
					Dosage	2	13	
					Ingredients	2	13	
			15	1.6	Injection	1	7	
					Overdosage	1	7	
					Steroid	7	47	
					Toxicity	1	7	
			Concern monitoring		Administer	2	22	
					Baseline check	1	11	
			9	1.0	Blood test check	1	11	
					Monitoring	5	56	
			Safety concerns		Drug herb interactions	7	44	
					Hygienic	1	6	
			16	1.7	Kidney failure	2	13	
					Liver injury	5	31	
					Side effect	1	6	
			Limited Knowledge and Exposure	7	0.7	Lack of formal education	5	71

System and Knowledge Gaps			Lack of scientific exposure	1	14
			Limited exposure in Malaysia	1	14
	Limited Facilities and Referral	20	2.1	Limited KKM T&CM	5
				Limited TCM Centre	15
				Limited TIM Centre	70
				No Referral	10
Total		946	100	946	

Source: Developed for current research

Based on Table 4.3, the first global theme, “Knowledge and Experience,” was among the majority of responses where the organizing themes of Knowledge, Limited Knowledge and Awareness, Sources of Information, Family and Peer Influence, and Personal and Observational Experiences were identified. Under Knowledge, participants referred to various basic themes such as familiarity with TCM and TIM principles (e.g., Yin-Yang, Five Elements, Vata-Pitta-Kapha) and types of treatments like acupuncture, cupping, ginseng, yoga, and Ayurveda. However, many participants also expressed Limited Knowledge and Awareness, revealing basic themes such as being “unfamiliar,” or having “no idea” about T&CM, especially regarding its application to menopause. The Sources of Information theme highlighted that most knowledge came from informal exposure with basic themes such as “heard,” “seen,” or from platforms like TikTok, YouTube, and Facebook, in fact only few participants gained knowledge through formal education or clinical experience. In Family and Peer Influence, responses revealed that exposure often came from observing or family members’ use of T&CM for conditions like menopause, back pain, or general well-being. The Personal and Observational Experiences theme showing experiences “better” or “boost energy,” “ineffective” or “unpleasant.” The second global theme, “Perceived Effectiveness and Suitability,” included organizing theme of Symptoms and Treatment Preferences while basic themes displaying menopausal symptoms like hot flashes, mood swings, vaginal dryness, and insomnia. Under the organizing theme Treatment Perspectives, mixed perceptions for basic themes like “temporary.” For the belief in effectiveness, some participants used terms like “holistic,” “help,” and “suitable” to describe their impressions.

The third global theme, “Acceptance and Professional Responsibility,” where organizing themes included Attitude, Professional Responsibility, and Referral to Gynaecologist. Within Attitude, some participants demonstrated a knowledge-seeking mindset through basic themes like “interested,” “willing,” and “worth,” while others expressed a positive attitude, using terms like “open” and “strongly recommend.” However, under neutral or negative attitudes, reflected in basic themes such as “not confident,” “sceptical,” and “uncomfortable.” Under Professional Responsibility, basic themes like “evidence,” “registered products,” “proper practitioner,” and “preference” were mentioned. Additionally, referral to gynaecologist was mentioned with basic themes such as “further assessment” and “hormone therapy.”

The fourth global theme, “Barriers of Integration,” where organizing themes included Safety and Trust Concerns and System and Knowledge Gaps. Basic themes like “steroid,” “toxicity,” “drug-herb interactions,” and “liver injury,” were mentioned. Under System and Knowledge Gaps, basic themes such as “lack of formal education,” and “no referral” showed.

Figure 4.2 illustrates the thematic network showing four global themes and their corresponding organizing themes related to the knowledge and acceptance of TCM and TIM in managing patients’ menopausal symptoms prior to intervention. The Knowledge and Experience global theme consists of five organizing themes: Knowledge, Limited Knowledge and Awareness, Sources of information, Family and Peer Influence, Personal and Observational

Experiences, which reflect participants' knowledge and awareness of TCM and TIM. Under the Perceived Effectiveness and Suitability global theme, the organizing themes include Symptoms and Treatment Preferences and Treatment Perspective, highlighting views on the relevance and potential of these treatments. The Acceptance and Professional Responsibility global theme links the organizing themes Knowledge-Seeking, Positive Attitude, Negative Attitude, Confidence in licensed products/practitioner, Evidence-based validation, Patient autonomy, Referral to gynaecologist representing medical doctors' openness, ethical considerations, and views on regulatory support in the integration process. Lastly, the Barriers of Integration global theme includes Concern herbal content, Concern monitoring, Safety concern, Limited Knowledge and Exposure and Limited Facilities which focus on practical and safety-related challenges in adopting TCM and TIM in clinical practice.

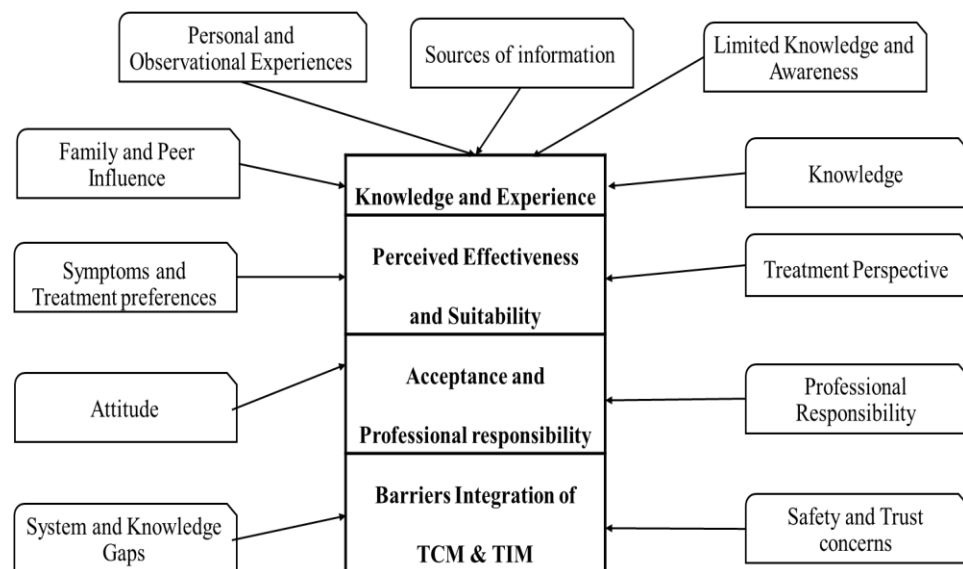


Figure 4.2 Thematic Network of Global Themes and Organizing Themes (Pre-Intervention)

Source: Developed for the current research

Based on Table 4.4 displayed how the global, organizing, and basic themes that emerged from participants' data were linked to relevant theoretical constructs through a hybrid approach that combined both inductive and deductive coding. Inductively, themes were developed directly from the participants' data, based on what participants said about their knowledge, experiences, perceptions, and attitudes toward TCM and TIM. These included themes such as "Limited Knowledge and Awareness," "Sources of Information," "Treatment Perspectives," and "Barriers of Integration." Once these themes were identified, they were deductively mapped to existing theoretical frameworks to provide structure and support deeper understanding. For instance, limited awareness of TCM and TIM was aligned with the concept of Product Knowledge and Familiarity, while attitudes like openness and willingness to learn were linked to Self-efficacy and Affective Attitude. Safety concerns were linked to Burden and Ethicality. While this dual process helped strengthen the theoretical relevance of the findings, the main discussion in the study emphasized the inductive themes, allowing the voices and lived realities of participants to remain focused in interpreting the data, rather than forcing the data to fit pre-existing models.

Table 4.4 Mapping of Global Themes to Theoretical Framework Constructs (Knowledge Constructs and TFA Components)

Global Themes	Organising Themes I	Organising Themes II	Basic Themes	Deductive Code: Knowledge Construct/ TFA
Knowledge and Experience	Knowledge	Development T&CM	A lot; More; Not aware; Slowly; Stagnant; Strong	Product Knowledge (General knowledge and perceptions of system growth or stagnation)
		Concepts/ Principle TCM	Counterbalanced; Five Elements; Yin Yang	Product Knowledge (Concept/Principles Exposure)
		Concepts/ Principle TIM	Vata, Pitta, Kapha; Five Elements	Product Knowledge (Concept/Principles Exposure)
		Types of TCM	Acupuncture; Black dates; Chinese herbal medicine (CHM); Cupping; Dong Quai; Ginkgo; Ginseng; Goji berries; Gua Sha; Massage; Moxibustion; Pressure Therapy; Qigong; Red dates; Reflexology; Tai Chi; Tit Tar; Tuina	Product Knowledge (Recognition of common modalities)
		Types of TIM	Aloe Vera; Ashwagandha; Ayurveda; Fenugreek; Homeopathy; Oil massage; Oil therapy; Saffron; Tamarind; Turmeric; Yoga	Product Knowledge (Recognition of common modalities)
Limited Knowledge and Awareness	Limited Knowledge and Awareness	Limited knowledge of TCM	Not sure	Familiarity, Product Knowledge (Limited exposure on mechanisms)
		Limited knowledge of TCM & TIM	Basic; Don't know; Lack; Layman; Superficial; Unfamiliar	Familiarity, Product Knowledge (Limited exposure on mechanisms)
		Limited knowledge of	Limited; No idea; No knowledge; Superficial; Unaware; Uncertain; Unexplored; Unexposed;	Familiarity, Product Knowledge (Limited exposure on

	TIM	Unversed	mechanisms)
	Lack awareness TCM/TIM-menopause	Not well versed; Unaware; Unexpected	Product Knowledge (Difficulty linking TCM/TIM with menopause)
Sources of Information	Formal Education	Acupuncture practical class; Ayurveda class; Historical; Housemanship acupuncture; Introduction TCM; TCM module; TCM short course	Expertise (Professional training)
	Informal Understanding	Seen; Hearsay; Heard	Familiarity (word-of-mouth exposure)
	Social media/Physical influence TCM	Advertisements; Facebook; Flyers; Newspaper; Promotions; Shop Poster; Signboards; Tik Tok; TV; Videos; YouTube	Familiarity
	Social media/Physical influence TIM	Advertisement; Facebook; Instagram; Internet; Online; Promotions; Signboard; TikTok; WhatsApp; Yoga everywhere; YouTube	Familiarity
	T&CM government hospital	Cheras Rehabilitation Hospital; Duchess of Kent Hospital Sabah; HKL; Hospital Port Dickson; Hospital Putrajaya; Clinic Kesihatan Kelantan; National Cancer Institute Putrajaya; Sabah Women and Children Hospital	Familiarity
	TCM centre	Charity clinic; KL Eco City; Kuchai Lama; Residential area; Subang Jaya Taipan; Tung Shin Hospital; Workplace	Familiarity (specific locations related to experience)
	TIM centre	Klang Ayurvedic centre; PJ Ayurveda; PJ Indian centre; Residential area	Familiarity (specific locations related to experience)

	Family & Peer Influence	Family used TIM	COVID pandemic; Irritable bowel; Menopause; well-being/psychosomatic	Familiarity with experience
		Family, friends, patients used TCM	Back pain; Body pain; Fracture; GI upset; Joint pain; Knee pain; Post menopause; Neck stiffness; Numbness; Post cancer; Postpartum; Shoulder aches; Sore throat; Stroke; Well-being/psychosomatic	Familiarity with experience
	Personal and Observational Experiences	Observed experiences	Bad; Better; Boost energy; Disasters; Growth; Improved; Ineffective; Successfully	Familiarity, Affective Attitude, Perceived effectiveness (witnessed outcomes)
		Personal experience on TCM	Confinement; Coughing; Diarrheal; Facial paralysis; Fracture; Heaty; Massage; Muscle pains; Neck stiffness; Period; recur; recurrent; sore throat; sprained; urticaria	Familiarity, Perceived Effectiveness, Affective Attitude (Personal trial builds belief in effectiveness and understanding)
		Personal experience on TIM	Acne; Asthma; Balancing; Cough; Daily meals; Flexibility; Flu; Menstrual cramps; PCOS; Relaxation; Tried; Unpleasant; Well-being	Familiarity, Perceived Effectiveness, Affective Attitude (Personal trial builds belief in effectiveness and understanding)
	Perceived Effectiveness and Suitability	Symptoms and Treatment Preferences	Menopausal Symptoms	Agitation; Anxiety; Appetite reduce; Back pain; Body ache; Bone pain; Depression; hot flashes; Insomnia; irregular bleeding; Lethargic; Low sexual drive; Migraines; mood swing; muscle pains; night sweats; Osteoporosis; Palpitation; sexual issue; sleep difficulty; Tiredness; vaginal dryness; Weak; weight gain
Recommended T&CM			Acupuncture; Ayurveda; Black cohosh; Herbal Supplement; Remifemin; Rhizome; St. John's	Product Knowledge, Perceived Effectiveness (Demonstrates belief

		menopause	wort; Yoga	in specific TCM/TIM for symptoms relief)
		Non-invasive treatment	Against; Different way; Natural source; Not Advocate; Not invasive; Orally; Outer part; Prefer not; Stop	Ethicality, Affective Attitude (ethical compatibility)
	Treatment Perspectives	Perceived Roles of TCM & TIM	Alternative; Complementary; Contraindication; Symptomatic relief menopause	Perceived Effectiveness (Perceived roles of TCM/TIM in menopausal care)
		Believe in effectiveness	Believe; Help; Holistic; Potential; Suitable	Perceived Effectiveness, Affective Attitude (Confidence in TCM/TIM potential effectiveness)
		Mixed perceptions on effectiveness	Depend on; Different; Moderate; Neutral; Personal respond; Placebo effect; Recur; Suits; Temporary; Uncertainty; Unique; Unsure; Varies	Perceived Effectiveness
Acceptance and Professional Responsibility	Attitude	Knowledge-Seeking	Can; Chance; Good; Important; Interested; Join; Learn; Opportunity; Read; Update; Upgrade; Useful; Widen; Willing; Worth	Self-efficacy, Affective Attitude (shows active engagement and willingness)
		Positive Attitude	Confident; Competent Recommend acupuncture; No concern; Open; Strongly/would recommend TCM; Strongly recommend TIM	Self-efficacy, Affective Attitude (shows advocate and support)
		Neutral/Negative Attitude	Deny; Ignored; Neutral; Normal; Not confident; Not convinced; Rare; Sceptical menopause; Scepticism; Uncomfortable; Usual	Affective Attitude
	Professional Responsibility	Confidence in licensed products/practitioner	KKM Facilities; Licensed practitioner; Proper practitioner; Proper Regulations; Properly trained; Registered products; Well established medications	Ethicality (regulatory confidence)

Barriers of Integration	Safety and Trust Concerns	Evidence-based validation	Certified; Credible; Data; Double-blinded study; Evidence; Research; Robust study; Scientific	Intervention coherence (research-backed treatments)
		Patient autonomy	Autonomy; Choice; Choose; Preference; Options; Patient centred choice; patient's right	Ethicality (respecting patient choice and autonomy)
		Referral to gynaecologist	Complex; Examination; Further assessment; Hormone therapy; O&G department; Supplement	Self-efficacy, ethicality (awareness of limitations)
		Concern herbal content	Content; Dosage; Ingredients; Injection; Overdosage; Steroid; Toxicity	Ethicality, Burden (concerns over product safety)
		Concern monitoring	Administer; Baseline check; Blood test check; Monitoring	Ethicality, Burden (concerns over product safety)
		Safety concerns	Drug herb interactions; Hygienic; Kidney failure; Liver injury; Side effect	Ethicality, Burden (concerns over product safety)
	System and Knowledge Gaps	Limited Knowledge and Exposure	Lack of formal education; Lack of scientific exposure; Limited exposure in Malaysia	Product Knowledge, Expertise, Self-efficacy
		Limited Facilities and Referral	Limited KKM T&CM; Limited TCM Centre; Limited TIM Centre; No Referral	Self-efficacy, Opportunity Cost, Intervention Coherence

Source: Developed for current research

4.3 Discussion (Pre-intervention)

This section presents the findings analysed using interpretative methods, based on the identified global and organizing themes. The main global themes explored are knowledge of TCM and TIM, perceived effectiveness and suitability, acceptance and professional responsibility, and barriers to integration. A detailed discussion follows, including participants' interview quotes, which are further supported by relevant past research to strengthen the credibility of the findings.

4.3.1 Knowledge of TCM and TIM

4.3.1.1 Knowledge

The level of knowledge regarding TCM and TIM varied among participants (medical doctors), directly influencing their perceptions and integration of these practices into medical care. Consistent with previous findings, healthcare professionals with greater exposure and understanding of TCM preventive and treatment services were more inclined to adopt and apply them into their daily clinical routines (Fan et al., 2018). This suggests that familiarity plays a crucial role in shaping openness toward integrative approaches.

Based on the findings of this study, some participants further highlighted the ongoing development and visibility of T&CM services in Malaysia. For example, P18 and P21 observed a growing shift in public perception, where

people are increasingly cautious about taking modern medicine due to concerns over side effects, such as kidney failure, lead to increased self-medication and preference for alternative traditional treatments.

“I think slowly it's coming up because people's mindset, like general population, they are trying not to take medicine whenever possible because along the years they feel like it is going to cause kidney failure and other side effects.” [P18].

“Maybe I think compared to when I just started working, maybe nowadays there are more people's trying to try on traditional practice, traditional medication self-treating.” [P21].

However, not all participants shared this positive view. P1 noted that the traditional practice remains underutilized or limited recognition within the medical field in Malaysia. Despite being aware of certain treatments such as acupuncture or yoga, P1 observed little progress or growth in the use of TCM or TIM in clinical settings over the years.

“Development is quite stagnant because for the past nine years of working, I'm still hearing the same thing, which is acupuncture for pain control and for post stroke patients. Other than that, rarely.” [P1].

Based on the participants' knowledge of the concepts and principles of TCM and TIM, most of them were able to mention key concepts of TCM, particularly

the ‘Yin Yang’ theory being the most frequently mentioned. In contrast, fewer participants (including P7 and P19) were knowledgeable and familiar with the concepts and principles of TIM such as the three doshas of Ayurveda’s (Vata, Pitta, and Kapha) and their association with the five natural elements (air, water, fire, earth, and space). However, this understanding was less widespread compared to TCM knowledge. This disparity in recognition highlights the established global promotion of Traditional Chinese Medicine through scientific validation and integration efforts, which contrast with the ongoing need for extensive research and evidence-based methodologies to elevate Ayurveda's international standing (Patwardhan et al., 2005).

“Because mostly TCM is based on the concept, which is Yin and Yang. If their menopause symptoms are like giving too low energy, they will use medication that can boost the vitality. So, it's like the opposite polarity. So that's the basic concept I can get from TCM. So that's what I know.” [P6].

“Ayurveda have three-part: Vata, Pitta and Kapha. The difference between these three are elements like for example I think Vata is your air element. Because we believe our human body is made of five elements: air, water, fire, Earth and other.” [P19]

Additionally, all participants were able to name several types of TCM or TIM treatments, respectively. For example, acupuncture was the most frequently mentioned type under TCM; other examples included Chinese Herbal Medicine

(CHM), ginseng, cupping, and so on. This shows TCM were well-known among medical doctors. For TIM, Ayurveda and yoga were the most types of TIM that commonly mentioned, along with herbal remedies such as ashwagandha and fenugreek. However, when comparing TCM and TIM, acupuncture was mentioned more frequently than Ayurveda. Some participants [P1, P3, P4, P12, P16] even reported that they had never heard of Ayurveda, and others were unaware that yoga is considered part of TIM. This showed that medical doctors seemed less familiar with TIM compared to TCM. This observation is consistent with broader trends in medical education, where acupuncture is frequently integrated into curricula and recognized by health ministries globally, often surpassing other Traditional, Complementary, and Alternative Medicine methods in familiarity and perceived efficacy among medical students and practitioners (Coşkun et al., 2023; Jeitler et al., 2024).

“Yoga, Yes I know, but I didn’t know it’s part of Indian.” [P16].

Many participants admitted having limited or superficial knowledge of TCM and TIM which impacted on their ability to confidently advise or guide patients seeking alternative traditional treatment. As one participant mentioned,

“I can say my knowledge about this is just like a normal person, like a layman because we don’t have much exposure about that.” [P4].

This knowledge gap is aligned with studies that show low levels of T&CM knowledge among medical professionals (including medical doctors). These studies also reported that the reluctance to recommend or refer patients to TCM

or TIM practitioners due to this lack of familiarity (Bahall & Legall, 2017; Liu et al., 2021; Milden & Stokols, 2004). Several participants expressed uncertainty about specific treatment applications such that P10 mentioned that they are unaware of treatments available for managing menopausal symptoms.

“No, I've never actually recommended, mainly because I'm not actually aware of what treatments are available to manage menopause for TCM and TIM.” [P10].

While some participants acknowledged a growing public interest and a shift towards TCM or TIM, their own familiarity and clinical exposure remained limited. This inductively observed knowledge gap aligns with the deductive category of product knowledge and intersects with the familiarity construct. Specifically, their unfamiliarity with T&CM modalities, principles (e.g., Yin-Yang or Vata-Pitta-Kapha), and applications demonstrates limited conceptual and procedural product knowledge.

4.3.1.1 Source of information (Formal and Informal Public Influence)

Participants gained their knowledge of TCM and TIM from various sources, including formal education informal, and social or physical influences. One participant [P22] acknowledged that these practices had been used for centuries and should not be ignored. With over 2,000 years of TCM and 5,000 years of TIM clinical history, both are key components of T&CM, widely practiced in

both Asian and Western countries (Panda et al., 2018; Wenbo Peng et al., 2014).

Many medical doctors felt unprepared to advise patients on TCM or TIM. Only a few participants (P1, P5, P7, P12) explained that they had limited formal exposure to TCM or TIM during their university studies. However, their education is primarily emphasized on modern Western medicine, with only a brief introduction of TCM or TIM. This is not surprising, considering that most participants completed their medical training during a time when TCM or TIM was rarely discussed and often excluded from the curriculum (Wahner-Roedler et al., 2006). For example, participants described their experience as limited to basic introductory theoretical, and the absence of continuity made it difficult for them to retain or apply this knowledge confidently in clinical practice.

“We have eight hours of traditional Chinese medicine module, and it’s just introduction to TCM. We went through the Five Elements and some diagnosis techniques like history taking, observation, listening, and pulse palpation. We had some exposure to acupuncture too, with practical classes on certain acupoints. But the memory was not there anymore.” [P1]

For some participants, hearsay or informal conversations served as their main exposure to TCM or TIM. These second-hand sources contributed to superficial knowledge, which did not equip them to confidently recommend or integrate TCM or TIM into clinical care. Additionally, social media and physical influences, such as banners, shop posters, and online promotions played a

significant role in shaping the participants' knowledge and awareness of these practices. These were often encountered in everyday environments rather than through formal sources.

“I would say both. Because sometimes they will promote their service on the banners when you stop by the traffic light or some shop. They will stick their poster, paste their poster on some of the Chinese shops nearby.” [P5]

“Indian, it's actually the promotions. Physically, I've never received any, but usually on Facebook on social media.” [P15]

Moreover, many participants showed limited awareness of the existence of T&CM units and services available under Malaysian government healthcare sector. While some were aware of its presence in certain hospitals such as Putrajaya Hospital, they were generally lacked knowledge of how many government hospitals offered such services or how these could be offered and integrated into patient care especially for menopausal women. For example, P21 referred to the T&CM unit at Putrajaya Hospital but noted that referrals were typically for pain management, showing limited awareness of broader T&CM services specifically for menopausal symptoms management.

“I think Putrajaya Hospital, we have this service. Yes, we have referred some patients over, but mainly for pain management.” [P21]

Participants reported aware both TCM and TIM centres, with a higher number identifying TCM centres around the residential area. This suggests that TCM centres are more commonly recognized or accessed among participants compared to TIM centres.

“Chinese medicine I have seen that around the housing area. I do see they actually do promotion in front of their shops.” [P7]

The findings suggest that the sources of information on TCM or TIM obtained among participants are often informal or limited specifically for menopause management which showed limited expertise and low familiarity with traditional medicine knowledge in the context of menopausal symptoms management. Deductively, this organizing theme links back to the “expertise” and “familiarity” constructs of the thematic framework, showing that limited formal education and reliance on informal public influences contributed to participants’ confidence in recommending or engaging with TCM/TIM to patients.

4.3.1.2 Family and Peers Influence

The influence of family members, friends, and social networks played a substantial role in shaping participants' perceptions and acceptance of TCM and TIM. Many participants described their awareness or trust in TCM or TIM through experiences shared within their social circles. This finding is consistent

with existing literature demonstrating the powerful role of interpersonal influence in healthcare decision-making. For example, Ong et al. (2024) reported that 85.4% of patients used TCM because it was recommended by family members, relatives, or friends. Similarly, Solmaz and Korkmaz (2025) found that 33.9% of older individuals received information about TCM through informal social networks, with many attributed their decision to use TCM to their social encouragement. Beyond immediate recommendations, traditional medicine practices are frequently transmitted intergenerationally, often persisting despite limited scientific validation (Che et al., 2024; Ma et al., 2021).

“They took traditional Indian herbal supplements, which were for general well-being. It’s not to treat something, just for general well-being.” [P23]

“I mean friends and my relative, especially the fractured patients. I'm not so sure what TCM does for fracture, but they just said that the bandage was medicated with Chinese medication. They had a bone healing powder that they wrapped with all the cement and everything, and then it caused healing of the bones. So that's what I heard, but not too much in detail.” [P9]

Another participant provided a detailed account of a family member’s use of Ayurvedic medicine by highlighting a perceived improvement in symptoms like mood changes, spotting, and inflammation related to menopause. This strengthened belief in the value and effectiveness of TIM.

“When I was in this place in India, it was like a clinic or shop selling herbs and medicines. They told us these herbs could help with mood symptoms, hot flashes, dryness, hair fall, and inflammation. So, for example, they gave a combination of herbs like Brahmi and Ashwagandha. Although my mother only took it for three months, there was a lot of improvement her PV spotting stopped, and though it briefly returned six months later, her symptoms eventually resolved. She also now goes for sesame oil massages at a centre twice a month which helps reduce her joint pain. She’s been doing this for more than six months.”
[P25]

These findings showed that social and familial experiences can significantly influence their treatment perception. Health beliefs are often passed down through generations, which help support the use of TCM and TIM even out of medical guidelines or policies.

4.3.1.3 Personal and Observational Experiences

Personal and observed experiences played a key role in shaping participants' perceptions and acceptance of TCM and TIM. Most participants reported having personal experience on TCM or TIM where mostly [P1, P3, P4, P5, P6, P8, P10, P12, P13, P14, P21, P22] used TCM such as herbal tea due to body heat, maintaining body health, massage or confinement, while Indian participants [P7, P9, P15, P18, P19, P23, P24, P25] commonly consumed TIM as part of their daily meals or only tried yoga before [P16, P20].

“Usually if I feel like heaty, like after eating fried food, I will still take that traditional herbal tea.” [P1]

“In fact, fenugreek is added in our food daily, I take fenugreek every day. So yes, that's what I'm telling like fenugreek, cinnamon, turmeric, all these things are part of our daily meals.” [P9]

Those who had direct experience with TCM or TIM reported greater trust in their therapeutic value. This supports with the findings by Abuduli et al. (2016), which stated that medical professionals who had positive personal experiences were more likely to believe in the efficacy of TCM and TIM, leading to increase acceptance and openness.

However, not all experiences resulted in positive outcomes. One participant shared that although several friends tried traditional supplements such as black

cohosh, ashwagandha, curcumin, and ginseng for menopausal symptoms. The traditional treatments did not produce the expected outcomes in symptom relief for menopause.

“Because personally, from what I have gathered from my friends, they had menopausal hot flashes, etcetera. So, they started using black cohosh, ashwagandha supplements, the curcumin and ginseng supplements. They try and see if it doesn't, coming back here and start on HRT before ending up with severe menopausal symptoms like hot flushes and insomnia. So, they tried three months, then it didn't work. It didn't maintain that regularity they expected, and they had to come back to HRT as well.” [P11]

Personal and observed experiences significantly influenced participants' acceptance of TCM and TIM. Positive outcomes often led to greater trust and openness, while negative outcomes reduced their perceived familiarity by leading participants reluctant or hesitant to recommend TCM and TIM.

4.3.2 Perceived Effectiveness and Suitability

4.3.2.1 Symptoms and Treatment Preferences

According to the participants, hot flashes were the most frequently mentioned menopausal symptoms. This symptom often led to related issues such as night sweats, sleep disturbances, depression, and mood swing. Therefore, it is important to provide a suitable treatment options for menopausal women, especially if they find modern Western treatments ineffective or experience contraindications. A few participants shared that they had previously recommended traditional medicine to menopausal women included acupuncture, Ayurveda, herbal supplements, and yoga. One participant specifically emphasized recommending herbal supplements that are supported by research, such as black cohosh and St. John's wort, which have shown benefits in alleviating symptoms like hot flashes and night sweats.

“Black cohosh, St. John's wort, rhizome, all these are coming from natural sources. And it has studies to show that actually it works.” [P22]

However, participants expressed different views on the effectiveness and suitability of TCM and TIM in managing patient's menopausal symptoms. Many participants preferred non-invasive treatment options, particularly acupuncture, yoga, and lifestyle modifications, as these were seen as safer and more aligned with conventional training.

“If they ask me, my answer would be, they can go for acupuncture, but the other herbs, because I'm not too well trained in this, I will not actually advocate for that. It's widely known that acupuncture can help with pain and also post-stroke. I would still advocate what I am comfortable with, I will still tell them, no pills, no powders, but other exercises, acupuncture, they can always try.” [P1]

Deductively, this theme relates to the construct of “perceived effectiveness.” These responses reflect openness among participants who were willing to consider integrating TCM or TIM when supported by scientific evidence particularly for symptoms relief in menopause.

4.3.2.2 Treatment Perspectives

Participants expressed mixed perspectives regarding the role of TCM or TIM in managing menopausal symptoms. These practices were perceived as an alternative of modern medicine, complementary therapies, or options for symptomatic relief particularly for patients to experience contraindications with modern medicine.

“These traditional treatments could offer an alternative to patients who are either not interested in or cannot tolerate conventional treatments like hormone replacement therapy (HRT), which can have side effects.” [P16]

Several participants expressed belief in the potential benefits of TCM and TIM which aligned with the findings of Cao et al. (2020), who reported that patients who believe in TCM may be more willing to accept acupuncture therapy. However, mostly mixed perceptions on effectiveness depends on individual responses. Some viewed the effects as temporary or uncertainty about the effectiveness of TCM and TIM, particularly when used alongside prescribed modern treatment.

“It seems to differ between people. Maybe some people get a good response, but sometimes is not... I'm not entirely sure whether it's purely from that treatment, because often people use it in combination right with their modern treatment as well. So, whether the effect came from the modern treatment or did it come from the TCM... I wouldn't feel too confident to say whether it's good or bad for the treatment. So just somewhere in the middle, like something you could potentially try but whether it's good or bad, it depends. Maybe could work for some people but might not be suitable for other people.” [P10]

These responses show that participants' acceptance of TCM and TIM largely depended on whether they believed the treatment truly worked. Thus, perceptions of effectiveness acted as a key determinant of their willingness to recommend or integrate these modalities into clinical care for menopausal women.

4.3.3 Acceptance and Professional Responsibility

4.3.3.1 Attitude

Many participants highlighted the importance of learning more about TCM and TIM, acknowledging their potential value in managing menopausal symptoms. This willingness to gain knowledge about TCM and TIM was motivated by personal interest and desire to provide holistic care for their patients. However, most of the studies revealed that patients are reluctant to disclose their use of TCM or TIM, because often perceived medical professionals having limited knowledge and interest on T&CM (Farooqui et al., 2011; Lau et al., 2025; Ong et al., 2024; Othman & Farooqui, 2018; Wahner-Roedler et al., 2006).

“Because knowledge is power. It’s always useful to be better informed, not just as a doctor, but as a woman myself. We only see patients for short periods of time, so we must empower them with safe and helpful information. If complementary medicines can support their health, then it’s important for us to understand it too.” [P13]

Willingness in learning TCM or TIM is important to foster the integration of TCM and TIM into clinical practice in mainstream healthcare system in Malaysia. Based on the pre-intervention interview, most participants expressed positive attitude of willingness to learn TCM and TIM for managing patients’ menopausal symptoms.

“If I have time on weekends, I’d definitely increase my knowledge. Traditional medicine is popular among older and even some younger generations. It’s definitely worth the investment, especially because my friends, my parents, my patients especially they are also women that are more than 50 years old of course they will experience few of the symptoms of menopause so it's definitely a worth investment.” [P6]

The willingness to explore and learn about TCM and TIM signals an important step toward integrating traditional and modern treatments within Malaysia’s mainstream healthcare system.

Participants showed diverse attitudes, from open-mindedness to scepticism. Those who strongly recommended TCM or TIM often had personal experiences or cultural influences supporting their beliefs. Most participants expressed openness toward the use of TCM and TIM in managing menopausal symptoms.

“I’m open to the idea that these treatments can help, particularly for symptoms like anxiety, stress, and even some physical discomforts like joint pain, which are common in menopausal women.” [P16]

Despite most participants expressed openness towards TCM and TIM, most of them feel unconfident recommending these treatments to patients due to the lack of in-depth knowledge and formal training. This hesitation was clearly reflected in participants' own accounts, where openness toward TCM and TIM in principle did not translate into willingness to recommend, primarily due to a

self-acknowledged lack of structured knowledge. As P7 stated:

“Because I don’t have enough knowledge to be confident. OK, I can only talk to my patient based on what I’ve got information from people, there is no proper handbook or guidelines I’ve read. If I had taken any TCM or TIM classes, then I’d feel more confident speaking with patients. Right now, I’m really getting information from my friends. So, my confidence level is not high. I can’t give patients the guaranteed answers or side effects because I’m not from that particular field. [P7]

However, some participants expressed doubts, particularly regarding the use of herbal medicine. This medical scepticism is seen as a key factor contributing to the low rate of patient referrals, which in turn hinders the integration of T&CM in hospital settings (Coulter, 2008).

“Mostly their liver and kidney functions... that’s what’s usually affected by herbal remedies. We often suspect traditional medicine use when liver profiles are abnormally high.” [P20]

Concerns on ingredients, particularly steroids and NSAIDs (non-steroidal anti-inflammatory drugs). Some highlighted the pain-relieving properties of traditional remedies often attributed to unregulated chemical components, as both a benefit and a risk.

“A lot of traditional Chinese medications for arthritis or knee pain

contain steroids, that's why they work. But long-term, it can harm the kidneys. I always tell patients, if you're going to take it, go to a proper Sensei because I can't advise on what I don't know. Some traditional medications have active compounds that act like pharmaceuticals.” [P22]

In addition, scepticism was also noted among medical professionals who perceived menopause as a natural, non-life-threatening stage, sometimes leading to underestimation of patients' suffering.

“Medical personnel need proper training and workshops. Many still believe menopause is just a natural process and that women should suffer in silence. But we're trying to empower women there is help, and they don't have to suffer.” [P14]

Most participants showed openness toward the use of TCM and TIM for managing menopausal symptoms, their lack of knowledge and training limited confidence in recommending these treatments where this aligned with a study conducted by Lau et al. (2025) who reported a positive association between knowledge and attitude toward T&CM, where a higher level of knowledge was linked to a more positive attitude toward its use in menopause management. This theme deductively linked to the construct of affective attitude where participants' emotional openness, curiosity, and personal motivation to learn about TCM and TIM showing positive affective attitude. However, participants also expressed feelings of uncertainty and doubt on the ingredients or contents of TCM and TIM where their affective attitude was leading by perceived

professionals' limitations and the need for scientific evidence.

4.3.3.2 Professional Responsibility

Professional responsibility as medical doctors play a significant role, as they are key decision makers in determining appropriate treatments options for patients. To ensure patient safety, most participants expressed confidence in licensed TCM and TIM practitioners and approved products safety influenced their willingness to recommend or referral of TCM and TIM to patients. Several participants believed that problems often happen when patients receive treatment from untrained or unlicensed TCM or TIM practitioners.

“I think normally it’s because they are not going to the proper TCM/TIM practitioners to seek treatment. So, I believe if they go to the proper one, it shouldn’t cause these kinds of problems.” [P16]

All participants emphasized the importance of evidence-based validation on safety, effectiveness, and potential side effects of TCM and TIM treatments for managing menopausal symptoms. They expressed a strong preference for scientific proof before recommending these treatments to patients, distinguishing personal use from professional responsibility.

“For me to prescribe to the patients, there must be clear evidence that it’s safe. Prescribing to myself is different because I take responsibility

for my own choices. But when it comes to my patients, I must take responsibility for my patient, so I must be in a professional way, which means there's evidence to it. I'm not denying the fact that traditional medication works, as long as the traditional medication can show the evidence that it actually is safe with research paper supporting it.” [P22]

However, most participants emphasized respecting the patients’ autonomy in choosing their preferred treatment options. Participants acknowledged that patients have the right to make their decision about their healthcare. Hence, medical doctors had the responsibility to explain the available treatment options including alternative treatments to help the patients make well- informed choices.

“It’s patient autonomy as well. Sometimes patients do not want the standard treatment; patients want to lean towards complementary medicine. Nowadays, many people are turning to complementary medications, alternative medications. I think it’s wise to recommend these alternative treatments.” [P9]

Furthermore, the referral process to gynaecologists highlighted the experts’ field of general practice and specialist field. General practitioners, family medicine and internal medicine can manage basic menopausal symptoms, more complex menopausal cases, particularly those requiring hormone therapy, were often referred to Obstetricians and Gynaecologists (O&G).

“That one we manage on our side, but more complex things usually require hormonal medication, which we don’t prescribe in our practice. So, we tend to refer patients with menopausal symptoms to a gynaecologist to make sure it’s not something severe, to run tests and confirm that it’s really menopause and not something else.” [P10]

Deductively, this theme relates to the constructs of ethicality and self-efficacy. The participants emphasized patient safety, autonomy, and evidence-based practice showed that their strong sense of ethical responsibility in clinical decision-making. At the same time, their willingness to recommend or discuss TCM and TIM depended on their self-efficacy, that is, their perceived confidence and competence in providing accurate, safe advice. The participants also based on their professional ethics by prioritizing “do no harm,” hence by improving their knowledge could therefore enhance both their ethical practice and self-efficacy in supporting TCM/TIM in menopause management.

4.3.4 Barriers of Integration

4.3.4.1 Safety and Trust Concerns

Despite most participants were openness and respecting the patients' choice on the use of TCM and TIM, there was rising concern over the risks of using TCM and TIM in managing patient's menopausal symptoms particularly given that many participants have received limited formal education or training on TCM and TIM (Liu et al., 2021). Concerns over the safety of herbal content, concern on monitoring, and safety concerns such as potential drug-herb interactions, kidney failure were expressed by participants. These concerns are consistent with findings from previous studies, which report side effects and possible harm from unsafe traditional herbal medicine. Zakaria and Abdullah (2021) emphasized the importance of medical professionals to enhance on patient education and awareness on herbal medicine. Herbal products, in particular, may pose safety risks due to their potential to interact with prescribed medications, the presence of undeclared ingredients, inadequate processing, and the absence of regulatory oversight or proper disclosure (Zakaria & Abdullah, 2021). Participants voiced about the contents of herbal medicines, including the possibility of hidden steroids which will cause liver failure.

“The first concern is, is the medicine contains steroid or not? That's the first thing. The second thing is, is this going to hurt their liver? Because liver will be break down, metabolize, or digest Chinese herbs.” [P3]

Moreover, most participants also expressed concerns about drug-herb

interactions and monitoring, leading many to discourage the use of herbal medicines for managing menopausal symptoms and overall well-being. This hesitation due to a lack of knowledge in this area among medical doctors, consequently, some medical professionals in South Africa and Ethiopia advised patients to discontinue herbal remedies when informed about their concurrent use with Western medicine (Meshesha et al., 2020; Tsele-Tebakang & Pretorius, 2022).

“We do not know how the chemicals will act with the medications. Because these are medications with unknown properties, we do not know such as will they counteract our current medications? In modern medicine, we usually know what combinations are safe, based on evidence and reports. But in T&CM, how sure are you are that it wouldn’t affect anything? It’s very hard.” [P4]

“We are afraid of traditional medicine are usually overdose and toxicity. In modern medicine, we can control the dosage, but in traditional medicine, even if a dosage is recommended, patients may administer it differently. That could alter the intended effect and potentially cause toxicity. So, if they want to take traditional medicine, I won’t oppose it, but it must be prepared and administered correctly.” [P6]

This theme relates to the components of burden, such as the lack of standardized information, insufficient training, and limited monitoring leading to an ethical burden on medical doctors. This perceived burden might further hinder open

discussions and decision-making with patients.

4.3.4.2 System and Knowledge Gaps

Challenges such as lack of formal education, and limited availability of TCM/TIM centres were identified as key barriers to the broader adoption of TCM and TIM among medical doctors and patients. These limitations impacted on participants' ability to refer patients for appropriate care or to explore TCM and TIM.

A key barrier was the lack of formal education on TCM and TIM during medical training. Many participants reported having minimal or no exposure to these topics in medical school, contributing to uncertainty about their safety and efficacy. As a result, most were reluctant to recommend TCM or TIM due to concerns about patient safety and professional responsibility.

“Medical school. Not really. We didn't touch that subject, just that something that you come up along the way work.” [P23]

Another major concern was the lack of accessible TCM and TIM centres. Participants noted that patients were unlikely to seek out such treatments if facilities were too far away or unfamiliar. Some were unaware of any nearby government or private TCM/TIM centres, making referrals difficult.

“Because there is no place or centre that we can actually refer, so patients would not go there because it's too far. So, I have to say to them like, OK, you find yourself, but I cannot do anything.” [P8]

Furthermore, the lack of direct contact with certified TCM or TIM practitioners created hesitancy in making recommendations. Without trusted sources or verified practitioners, participants were reluctant to refer patients although there were presence of private TCM/TIM facilities in Malaysia. Currently, private T&CM facilities in Malaysia currently only require a business license from local authorities, and are not yet regulated under a national Act, hence this raises concerns about the quality, safety, and consistency of services provided outside of MOH facilities (Traditional and Complementary Medicine Division, 2023). This regulatory gap further contributes to low confidence in recommending TCM/TIM or referring patients.

“I recommend if I personally really know someone that really doing this thing, then only I can recommend. Because I don't really know of any TCM or TIM practitioners. So even if they ask me to recommend also, I can't really recommend.” [P5]

This theme relates to the components of opportunity costs, as the lack of education, infrastructure, and regulatory systems limits both doctors' and patients' opportunities to obtain better treatment TCM/TIM options. Without structured systems, doctors lose valuable opportunities to expand their practice holistically, while patients miss potential benefits of alternative and

complementary therapies.

4.4 Intervention (Post-Seminar Questions)

Before conducting the second phase of online interviews with all 25 participants, each participant was required to answer four questions related to TCM and four questions related to TIM. All participants listened to the seminar recordings, read through the experts' presentation slides, and completed the TCM and TIM questions. Below are the statistics reflecting the responses provided by the participants, with an average score of 7.12 out of 8, the mode and median scores were both 7, indicating that the most frequent and median score among participants were high, the standard deviation was approximately 0.95 which is low on an 8-point scale, indicating minimal variability which means most participants had similar scores and that there was not a lot of difference in how well they understood TCM and TIM after the seminar; the range was $8 - 5 = 3$, which shows that the difference between the highest and lowest scores was not large (Refer Appendix D). This supports the conclusion that performance was consistent. The 100% completion rate further highlights the effectiveness of the seminar in delivering key concepts and engaging participants.

In the TCM section (Table 4.5), the participants performed exceptionally well which all participants answered Question 2 correctly (100%), and 96% correct response rate for Questions 1, 3, and 4. Similarly, in the TIM section (Table 4.6), participants also showed strong performance, with correct response rates

ranging from 88% to 92% on most questions. However, Question 4 had a lower correct response rate of 52% suggesting that this area was more challenging for participants, possibly due to a lack of emphasis during the seminar or difficulties in recalling specific herbal treatments.

Table 4.5 Correct and Incorrect Responses for TCM Questions

Questions (TCM)	Number of participants who answered correctly	Number of participants who answered incorrectly
1. The Fire element, associated with the heart, is primarily responsible for symptoms like hot flashes and irritability during menopause.	24 (96%)	1 (4%)
2. What are the two opposing forces in the body that TCM believes must be balanced to manage menopausal symptoms?	25 (100%)	0 (0%)
3. The Five Elements in TCM are Wood, Fire, Earth, Metal, and Water.	24 (96%)	1 (4%)
4. What menopausal symptoms can be relieved through acupuncture?	24 (96%)	1 (4%)

Source: Developed for current research

Table 4.6 Correct and Incorrect Responses for TIM Questions

Questions (TIM)	Number of participants who answered correctly	Number of participants who answered incorrectly
1. What are the three Doshas that Ayurveda says become imbalanced during menopause?	22 (88%)	3 (12%)
2. Patients undergoing fasting as part of the detoxification program should be anaemic.	23 (92%)	2 (8%)
3. Menopausal women should reduce their intake of spicy foods and alcohol, especially if they have Pitta-dominant symptoms.	23 (92%)	2 (8%)

4. Which Ayurvedic herb is recommended for controlling hot flashes during menopause?	13 (52%)	12 (48%)
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Source: Developed for current research

The distribution of total points scored further supports that most participants had a high level of understanding. A significant proportion scored either 7 or 8 points (Figure 4.3), indicating that they retained much of the information presented. Only a small number of participants scored 5 or 6 points, and none scored below 5 (Figure 4.3), indicating that although the overall understanding was strong, a few participants may have faced minor challenges. Therefore, it is recommended that future seminars place greater emphasis on the more challenging TIM topics to address these gaps. Overall, the results showed a successful intervention with opportunities for targeted improvements.

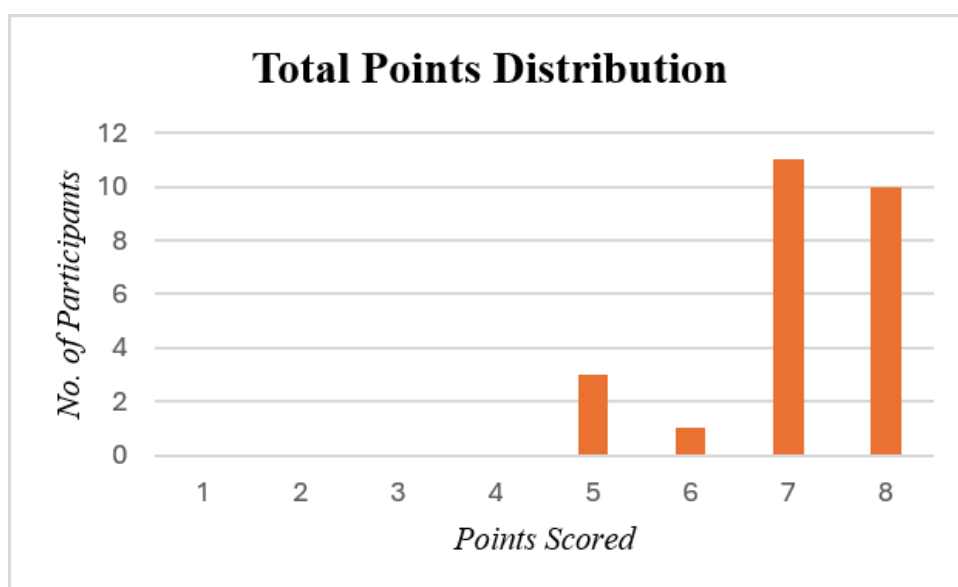


Figure 4.3 Total Points Distribution Among Participants

4.5 Thematic Analysis (Post-intervention)

The post-intervention thematic analysis followed the same structured approach as the pre-intervention phase, by using thematic network as a tool to model and develop the themes into basic themes, organizing themes, and global themes. This phase focused on capturing the shifts in knowledge, attitudes, and ethical perspectives among medical doctors after they participated in the educational seminar on TCM and TIM for menopause care.

The thematic analysis for post-intervention identified 92 basic themes which were drawn from the quotations in the interview transcripts. As shown in Table 4.7, these basic themes were gradually refined into organizing themes and then into global themes. These 92 basic themes were then systematically refined into 16 first level organizing themes (organizing themes I) and subsequently grouped into 9 second level organizing themes (organizing themes II). These organizing themes were then further condensed into 4 global themes. It gave clear numbers highlighting key words shared by the 25 interview participants. In total, 519 quotes were identified during the coding process using Atlas.ti 9 software.

Table 4.7 Thematic Analysis from Basic Themes to Organizing Themes and Global Themes (Post-Intervention)

No.	Global Themes	Organizing Themes I	Organising Themes II	No. Of Quotes	% Total	Basic Themes	No. Of Quotes	% Within Organizing Theme
1	Knowledge	Familiarity	Familiarity TCM	3	0.6	Familiar	1	33
						Easier	2	67
			Limited Familiarity TIM	10	1.9	Alien	1	10
						Complex	1	10
						Complicated	2	20
						Exposure Low	1	10
						Not Familiar	5	50
		Insights	Insightful Learning	26	5.0	Good Insight	1	4
						New Information	2	8
						New Insight	3	12
						New Knowledge	20	77
		Understanding		12	2.3	Clearly TIM	1	8
						Impressed TIM	1	8
						New world	1	8
						Understanding	8	67
						Widen Horizon	1	8
		Valuable	Interest in learning	10	1.9	Interesting	4	40

			Interested	6	60			
			Beneficial	3	8			
			Equipped	3	8			
			Good	5	13			
			Guide	3	8			
			Important	8	21			
			Knowledge Key	1	3			
			Knowledge Power	1	3			
			Patients' Demand	5	13			
			Prepare	1	3			
			Useful	3	8			
			Worth	3	8			
			Worthwhile	2	5			
2	Perceived Effectiveness and Suitability	Treatment Perspectives	Importance Learning	38	7.3	Alternative	17	33
						Combine	8	16
						Complement	5	10
						Complementary	6	12
						Option	15	29
		Perceived Roles	51	9.8	Believe	6	12	
					Benefit	7	14	
					Effective	16	33	
					Good	3	6	
					Help	5	10	
Perceived Benefits	49	9.4						

						Holistic	8	16
						Natural	4	8
		Treatment Preferences				External Usage	8	44
			Prefer Non-invasive	18	3.5	Non-consuming Therapy	3	17
						Non-invasive	4	22
						Orally	3	17
3	Acceptance and Professional Responsibility	Attitude				Advocacy	6	11
						Confident	23	39
			Positive Attitude	53	10.2	Convinced	8	16
						Open	12	21
						No concern	4	9
			Negative/Conditional Recommendation	7	1.3	Not Convinced	4	57
						unable give advice	3	43
		Professional Responsibility				Do no harm	5	5
						Ethicality	14	14
						Evidence-based	16	16
						Feedback	1	1
			Ethical and Professional Considerations	97	18.7	Gynae	1	1
						Licensed Practitioner	21	22
						Patients' autonomy	9	9
						Patients' choice	6	6
						Patients' option	6	6
						Robust Data	3	3

					Situational	10	10
					Unethical	5	5
					Accept Ayurvedic	1	2
					Advise	15	29
					Do not accept complementary	7	14
					Integrate	11	22
					Recommendable TCM	3	6
					Recommendable TIM	12	24
					Suggest	2	4
4	Barriers of Integration	Safety and Trust			Delay treatment	1	2
					Dosage	2	3
					Drug Herb interaction	4	6
					Herbal Medication	24	39
					Internal Treatments	3	5
					Monitoring	17	27
					Non licensed practitioner	1	2
					Not Standardized	1	2
					Safety	3	5
					Self-medication	2	3
					Side Effect	4	6
		Challenges			Lack of Facilities	2	11
		Healthcare System Limitations	18	3.5	Lack of Financial	4	22
					Lack of Manpower	5	28

			Limited scientific research/evidence	7	39
			Lack of awareness	2	14
			Lack of formal education/knowledge	6	43
			No referral	1	7
			Overburdened learning	1	7
			Stigma	4	29
			Total	519	100

Source: Developed for current research

Based on Table 4.7, the first global theme, “Knowledge,” captures how participants perceived and processed the information presented during the seminar. It is divided into subthemes such as Familiarity, Insights, Understanding, and Value. Under Familiarity, some participants expressed that they were already familiar with TCM, but many revealed limited familiarities with TIM, using descriptors such as “alien,” “complicated,” or “not familiar.” The Insights organizing theme reflects participants’ learning experiences, with many indicating that the intervention provided “new knowledge” and was “insightful.” The Understanding theme highlights how participants began to gain concepts more clearly, with some describing the experience as “widening their horizons.” Under Value theme shows that participants found the knowledge not only interesting but also important for fulfilling patient demand and professional preparation.

The second global theme, “Perceived Effectiveness and Suitability,” focuses on how participants view the potential of TIM/TCM in healthcare. The Treatment Perspectives organizing theme shows that many participants viewed these methods as alternative, complementary, or additional treatment options. The Perceived Benefits subtheme reflects that participants believed TIM/TCM to be effective, holistic, natural, and beneficial to patients. Meanwhile, the Treatment Preferences theme highlights a clear preference for non-invasive treatments.

The third global theme, “Acceptance and Professional Responsibility,” contains the largest number of quotes, indicating it was a major area of focus. It includes themes

such as Attitude, Negative/Conditional Recommendation, and Professional Responsibility. Most participants expressed a positive attitude towards TIM/TCM, using terms like “confident,” “convinced,” and “open.” However, a small group expressed hesitation, not convinced or inability to advise on such treatments. The subtheme of Professional Responsibility emphasizes the need for ethical practice, evidence-based decision-making, and the importance of licensing and patient autonomy. Many participants also supported recommending TIM/TCM when appropriate, indicating a willingness to integrate these approaches into mainstream healthcare, though some scepticism remained.

The fourth global theme, "Barriers of Integration," identifies key challenges preventing the broader adoption of TIM/TCM. The Safety and Trust organizing theme raises concerns about drug-herb interactions, side effects, dosage, and the lack of standardized treatments. Monitoring and non-licensed practitioners' issues were also mentioned. In the Challenges organizing themes, both systemic and social barriers were highlighted. Participants noted limitations in healthcare infrastructure, funding, and manpower, insufficient scientific research. Additionally, social barriers such as lack of awareness, stigma, and lack of formal education or referral systems were hindered to acceptance and recommendation.

Figure 4.5 illustrates the thematic network showing four global themes and their corresponding organizing themes related to the knowledge and acceptance of TCM and TIM in managing patients' menopausal symptoms post-intervention. The

Knowledge Global theme consists of three organizing themes: Familiarity, Insights and Valuable which reflect participants perceived the usefulness, depth of understanding, and level of exposure to TCM and TIM in managing menopausal symptoms. Under the Perceived Effectiveness and Suitability global theme, the organizing theme Treatment Perspective and Treatment Preferences highlights participants' views and preferences on the appropriateness of integrating TCM and TIM into menopause management. Attitude and Professional Responsibility global theme includes the organizing themes Attitude and Professional Responsibility, which represent medical doctors' openness, ethical stance, and willingness to incorporate or refer patients to TCM and TIM to menopausal women. The Barriers of Integration global theme includes the organizing themes Safety and Trust and Challenges, focusing on perceived risks and difficulties in incorporating TCM and TIM into healthcare practice.

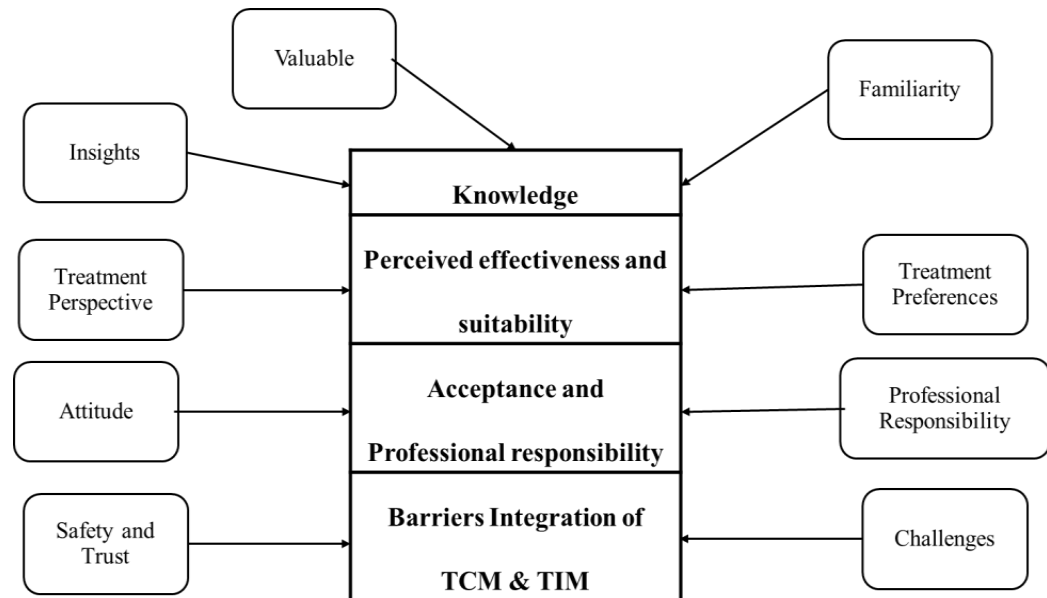


Figure 4.5 Thematic Network of Global Themes and Organizing Themes (Post-Intervention)

Source: Developed for current research

Based on Table 4.8 showed the mapping of organizing themes to the theoretical framework constructs by mapping both inductive and deductive coding approaches, in which the hybrid inductive and deductive analysis approach was employed in this study. Inductively, data were first organized into global, organizing, and basic themes based on patterns that developed directly from participants' transcripts. These themes were then deductively matched with established theoretical constructs, including the 3 Knowledge Constructs and the 7 components of the Theoretical Framework of Acceptability (TFA), to help explain the findings more clearly and link them to existing theory. For example, themes such as “Familiarity TCM” and “Limited Familiarity TIM” were linked to the construct of Familiarity, while “Perceived Benefits” were mapped onto Perceived Effectiveness. Despite this hybrid approach in the analytical framework, the discussion section primarily focuses on the inductively derived themes to preserve the originality of participants lived experiences and viewpoints, ensuring that the voices of the respondents remain focus in interpreting the data. The deductive mapping in Table 4.8 serves to complement this by providing a theoretical insight through which to understand the broader implications and relevance of the findings in the context of TCM and TIM in managing menopausal symptoms.

Table 4.8 Mapping of Organizing Themes to Theoretical Framework Constructs (Knowledge Constructs and TFA Components)

Global Themes	Organizing Themes I	Organising Themes II	Basic Themes	Deductive Code: Knowledge Construct/ TFA
Knowledge	Familiarity	Familiarity TCM	Familiar; Easier	Familiarity
		Limited Familiarity TIM	Alien; Complex; Complicated; Exposure Low; Not Familiar	Familiarity
	Insights	Insightful Learning	Good Insight; New Information; New Insight; New Knowledge	Intervention Coherence
		Understanding	Clearly TIM; Impressed TIM; New world; Understanding; Widen Horizon	Intervention Coherence
	Valuable	Interest in learning	Interesting; Interested	Affective Attitude
		Importance Learning	Beneficial; Equipped; Good; Guide; Important; Knowledge Key; Knowledge Power; Patients' Demand; Prepare; Useful; Worth; Worthwhile	Opportunity Costs, Ethicality
Perceived Effectiveness and Suitability	Treatment Perspectives	Perceived Roles	Alternative; Combine; Complement; Complementary; Option	Perceived Effectiveness
		Perceived Benefits	Believe; Benefit; Effective; Good; Help; Holistic; Natural	Perceived Effectiveness
	Treatment Preferences	Prefer Non-invasive	External Usage; Non-consuming Therapy; Non-invasive; Orally	Burden
Acceptance and Professional Responsibility	Attitude	Positive Attitude	Advocacy; Confident; Convinced; Open; No concern	Affective Attitude
		Negative/Conditional Recommendation	Not Convinced; unable give advice	Self-efficacy
	Professional	Ethical and	Do no harm; Ethicality; Evidence-based;	Ethicality

Barriers of Integration	Responsibility	Professional Considerations	Feedback; Gynae; Licensed Practitioner; Patients' autonomy; Patients' choice; Patients' option; Robust Data; Situational; Unethical	
		Acceptance and Recommendation	Accept Ayurvedic; Advise; Do not accept complementary; Integrate; Recommendable TCM; Recommendable TIM; Suggest	Self-efficacy
	Safety and Trust	Concern	Delay treatment; Dosage; Drug Herb interaction; Herbal Medication; Internal Treatments; Monitoring; Non licensed practitioner; Not Standardized; Safety; Self-medication; Side Effect	Burden (Risk concerns increase perceived effort)
	Challenges	Healthcare System Limitations	Lack of Facilities; Lack of Financial; Lack of Manpower; Limited scientific research/evidence	Burden
		Personal and Social Challenges	Lack of awareness; Lack of formal education/knowledge; No referral; Overburdened learning; Stigma	Burden, Opportunity Cost

Source: Developed for current research

4.6 Discussion (post-intervention)

This section presents the findings analysed using interpretative methods, based on the identified global and organizing themes for post-intervention. The main global themes explored are knowledge of TCM and TIM, perceived effectiveness and suitability, acceptance and professional responsibility, and barriers to integration. A detailed discussion follows, including participants' interview quotes, which are further supported by relevant past research to strengthen the credibility of the findings.

4.6.1 Knowledge

4.6.1.1 Familiarity

Post-intervention results showed that familiarity with TCM improved significantly, while familiarity with TIM remained comparatively limited. Before the seminar, most participants reported little awareness of TIM, but after the seminar, they gained at least a conceptual understanding of its principles and applications. On the other hand, TCM remained more accessible and recognizable, partly due to its stronger global presence and visibility in Malaysian culture.

Malaysia is a multi-ethnic and multi-cultural country with Malays, Chinese, and Indians as the largest ethnic groups. According to Mohiuddin et al. (2021), Malay

and Chinese population showed comparatively higher knowledge of TCM, with 95.4% and 76% of respondents respectively showing good knowledge, and 16% Chinese respondents showed fair knowledge toward TCM where this align with the study by Patwardhan et al. (2005) who highlighted that TCM is more widely recognized globally due to extensive scientific research and stronger evidence base compared to TIM. In contrast, a review conducted by Krishna et al. (2020) noted that with the rapid changes of globalization, Ayurveda has failed to meet the current scientific trend with conceptually old scientific validations and due to this lack of scientific validations, leading to limited awareness of TIM, which in turn influenced its global acceptance. The limited exposure to TIM could be attributed to a lack of formal education, limited high quality randomized clinical trials (RCTs) and a lack of mainstream integration, as discussed by M Alswaidi and A Abualssayl (2025). One participant expressed that TCM concepts, such as Yin-Yang and Qi, are more familiar due to their widespread presence in culture. The participant acknowledged hearing about Ayurveda but felt it was more complex and less commonly discussed. This reflects the broader challenge of TIM's accessibility outside specific cultural contexts.

“I feel like TCM is easier for me to understand rather than TIM maybe because it has a lot of terms that is quite difficult to comprehend. Yin and Yang is everywhere, everyone knows that concept, Ayurveda it's not widely talked about as compared to the traditional Chinese medicine.” [P2]

Similarly, several participants mentioned that they were not familiar with Ayurveda, especially its use of herbal remedies. Another participant [P4] pointed out that Ayurveda was too difficult to understand due to language barriers, although there is research supporting Ayurvedic medicine, but the quality of evidence is generally lower compared to others due to smaller sample sizes and less rigorous study designs.

“I'm not too sure and it's quite complicated when it comes to Ayurvedic herbal remedies. Those are very, very alien to me, actually.” [P1]

" It's a bit hard to understand Ayurveda because it's new to me. There's also a language barrier like translations which is quite straightforward and sometimes unclear. I think for Ayurvedic, they do have some research, supporting data, but the quality of evidence might not be as strong." [P4]

The familiarity gap between TCM and TIM runs deeper than knowledge. Most participants already knew Yin-Yang before the seminar; they grew up with it. Mohiuddin et al. (2021) found that Chinese respondents had the highest knowledge of TCM with 89.9% correct answers, compared to 75.9% among Malay and 60% among Indian respondents, with ethnicity showing a statistically significant association ($p < 0.001$). Religion added another layer: Buddhist followers scored 87.5% correct, compared to 44.4% among Muslim and 45.8% among Hindu

respondents. Ayurveda has not achieved the same cultural reach. For most non-Indian participants, it remained unfamiliar even after the seminar. This matters because knowledge alone is not enough. Tang et al. (2025) found that even within the Malay community, TCM remains underutilised despite generally positive attitudes, as cultural, religious, and linguistic factors continue to separate knowing from doing. Both modalities, therefore, face the same knowledge-to-behaviour gap but TIM carries an additional barrier of limited cross-community visibility that TCM does not face to the same degree. Closing the gap for TIM will take more than a single seminar; it requires sustained integration into healthcare education and public awareness over time (Goh, 2021).

4.6.1.2 Insights Gained

After the seminar, participants expressed gaining new insights, including surprise at the effectiveness of TCM and TIM in managing menopausal symptoms and deeper understanding of its concepts, principles and connections into clinical applications, making them more open to recommend these TCM or TIM in practice. Before the seminar, most participants had not made these connections. This shift is consistent with García-Escamilla et al. (2016) highlighted that increased knowledge and insights among medical professionals would fosters collaboration between conventional medicine and traditional medicine, greater willingness to integrate and recommend these traditional practices for managing patients' menopausal

symptoms.

For example, P6 acknowledged that before to the seminar, their understanding of Chinese and Indian medicine was limited. However, after gaining insights into key concepts such as Yin-Yang balance and Ayurvedic principles and learning about specific herbs and treatments, they felt more confident in recommending these options to patients. After attending the seminar, they noted that it provided knowledge on how TIM could be applied to manage menopausal symptoms in menopausal women, along with the information on both practical and beneficial for clinical use.

“After the online seminars, I definitely gained new knowledge, especially on how traditional Indian medicine can be used to manage symptoms of menopause in elderly women. It also introduced specific herbs and activities, along with explanations of the underlying principles. That knowledge was really beneficial for me.” [P6].

Similarly, P18 shared that although they were familiar with general concepts such as Yin-Yang and the Ayurvedic principle (Vata, Pitta, Kapha), they had never connected these ideas direct application to menopause management. The seminar introduced them to the potential application of TCM and TIM in a new context. One of the participantnew8] was particularly surprised to learn about the potential benefits of specific Indian herbs, such as ashwagandha, in managing menopausal

symptoms, providing the new knowledge can influence perceptions and enhance clinical recommendations.

“We knew about the concept of Yin and Yang, and Vata, Pitta, and Kapha, but I never thought about integrating it with menopause. I also never came across any Indian herbs that could help with menopause. It was new to me when I learned about them, even though I’ve heard of herbs like ashwagandha since I was small. I just didn’t know they could actually relieve menopause symptoms, so that was a new thing for me.” [P18].

4.6.1.3 Valuable

Post-intervention, participants placed greater value on TCM and TIM knowledge, seeing it as beneficial for both professional competence and patient safety. Many participants believed that understanding these medical systems is essential, especially for medical professionals.

Participants also acknowledged the benefits of TCM and TIM knowledge in clinical practice. Understanding the fundamental properties, applications, and potential side effects of traditional remedies was considered beneficial for medical doctors, particularly for instance P6 emphasized the importance of having knowledge on TCM and TIM as a medical doctor as due to many patients using traditional medicine

alongside conventional treatments, often without disclosure. This aligned with the studies conducted in New Zealand reported that many medical professionals considered gaining knowledge about TCM or TIM as an important professional issue, and they support the idea that T&CM should be integrate into medical education curriculum (Liu et al., 2021; Poynton et al., 2006; Taylor, 2003). However, our findings differ slightly in that where initially majority participants undervalued this knowledge, only appreciating its importance after attending the seminar. This difference may be due to factors such as the limited integration of T&CM in Malaysian medical education leading the perceived value of T&CM knowledge among doctors may remain low.

P6 also highlighted that some traditional herbs, such as ginger and garlic, are recognized for their therapeutic benefits and are even incorporated into modern Western supplements. Therefore, medical doctors must be aware of how these herbal remedies might interact with prescribed medications or contribute to symptoms. This reinforces the idea that a basic understanding of traditional medicine can help medical doctors to make more informed decisions and provide safer, more holistic care for menopausal women.

“It's important for every healthcare practitioner to know the basic properties and possible adverse effects of those herbs and medicines. So that we can determine whether a patient's symptoms are side effects of medication or herbs, or if they are due to the disease itself and certain herbs can help

alleviate symptoms, so knowing their properties and functions is beneficial.”

[P6]

Additionally, the participants’ interest in learning about TCM and TIM played a crucial role in leading to the acceptance of TCM and TIM in clinical practice. The study’s findings found that many participants were curious and willing to expanding their knowledge about TCM and TIM, aligning with studies in New Zealand, which found that medical professionals were interested in receiving further education on T&CM (Liu et al., 2021; Poynton et al., 2006). For example, P25 shared that the seminar helped shift their perspective on traditional culture and beliefs which there was no clearly scientific validation proven. After gaining a better understanding from seminar, they expressed a growing appreciation and openness towards TCM and TIM practices.

“Because it's actually interesting. For example, the concept of heaty food and cold foods, something I never believed in. My grandparents used to talk about it, but I never took it seriously because there was no scientific explanation. However, after listening to the seminar and going through the slides, I realized it’s all interconnected. So, yeah, there’s more acceptance now.” [P25]

This shift in perspective highlights how structured education on TCM and TIM can influence medical professionals' willingness to explore alternative treatment

approaches. Furthermore, a study by Ee et al. (2020) found that TCM or TIM contribute to broader and more holistic approach to healthcare, particularly in regions with limited access to modern medical facilities.

“Because sometimes there is a limit to treatment in modern medicine, right? Some patients may not respond to the typical medication we prescribe. So, if we can provide them with an alternative that may help, then it’s worth it.”
[P20]

4.6.2 Perceived Effectiveness and Suitability

4.6.2.1 Treatment Perspectives

Participants expressed different perspectives on the role of TCM and TIM in managing menopausal symptoms. Many viewed these TCM and TIM as either alternative, or complementary role where many consider and believed in their natural and effectiveness and regard the use of TCM or TIM as a complement to Western treatments (Liu et al., 2021). P21 highlighted that TCM and TIM could serve as alternatives for patients who are not eligible for HRT or contraindicated.

“Because not all patients are eligible for hormonal replacement therapy such as patients who has breast cancer or endometrial cancer ovarian cancers whereby oestrogen is contraindicated in their cases. So, we can consider

offering them TCM or TIM.” [P21]

Similarly, P6 emphasized the importance of complementary, suggesting that TCM and TIM should not function separately but should complement with modern Western medicine. They noted that traditional treatments could enhance immunity and offer benefits beyond what conventional medicine typically provides.

“Traditional medicine shouldn't exist alone, it should be a combination effort, both traditional and Western medicine. They should complement each other so that it can achieve a better overall effect.” [P6]

Overall, participants viewed TCM and TIM as valuable complementary and alternative approaches to manage menopausal symptoms, particularly for patients who are not suitable for conventional hormone therapy. They were belief that integrating traditional and Western medicine could offer more beneficial, holistic, and effective care, rather than relying on one treatment alone.

4.6.2.2 Treatment Preferences

A few participants [P3, P4, P11] showed a preference for non-invasive treatments such as acupuncture, yoga, and meditation, which they considered beneficial, especially for managing menopausal symptoms. However, a key concern

highlighted was lack of monitoring, especially without proper guidance from medical professionals. Patients who are self-medicated by traditional herbal medicine may face potential adverse effects or interactions with conventional treatments. This aligned with existing study revealed that traditional medicine use by patients unsupervised and unmonitored were the key concern (Bahall & Legall, 2017).

One participant emphasized their selective acceptance of traditional medicine, particularly for non-invasive therapies like acupuncture, meditation, and yoga, when conventional treatments like HRT were ineffective in addressing menopausal symptoms such as hot flashes.

“If the Western medicine is not working, or does not help, I might recommend acupuncture, meditation, or yoga. But for me, my acceptance level is up to this point. I can accept if my patients use non-consumable therapies, not taking anything orally, like herbs or pills, without medical supervision.” [P3]

This perspective reflects a measured approach to integrate traditional medicine, where non-invasive therapies are more acceptable, whereas the consumption of herbal remedies or supplements requires clear regulation guidelines and monitoring.

4.6.3 Acceptance and Professional Responsibility

4.6.3.1 Attitude

Participants expressed varying attitudes towards the use of TCM and TIM in managing the menopausal symptoms. Most participants emphasized that scientific validation is key to confidently recommending TCM or TIM. The presence of evidence-based research and proven benefits would increase their comfort in integrating these approaches into clinical practice.

“Because it's scientific-based, research has been done, and the evidence proves that it's really helping, then why not? If testing is done and there's not much harm compared to the benefits the patient can get, then definitely I will offer it to patients.” [P15]

Although after attending the interventional seminar, majority participants reported increased confidence in TCM and TIM. However, not all participants felt fully equipped to recommend traditional treatments. Some acknowledged their limited depth of knowledge, emphasized more education training should be provided in order to recommend TCM or TIM confidently. For instance, P6 rated their confidence at a moderate level, noting that their knowledge came primarily from the seminar, a few research articles, and lecture materials. While this provided a helpful introduction to the basic principles and treatments, they felt that a more

comprehensive understanding on TCM and TIM particularly of the properties and effects of specific herbs and medicines was necessary in order to make informed recommendations to menopausal women.

“I would rate my confidence as a four out of five. But to be very confident, I have to fully understand the properties of each medicine and herbs and also the true understanding of the principles. Only then can I confidently recommend them. So, for now, I can suggest them based on what I've learned, but I still need to do further study and reading on the subject.” [P6]

These perspectives are consistent with findings from a study revealed that the attitudes of medical doctors related to the integration of TCM or TIM into the healthcare system (Sewitch et al., 2008). However, scepticism persists, particularly regarding the lack of high-quality experimental studies, insufficient clinical guidelines, and uncertainties about efficacy and safety. Several studies have documented that medical doctors require more scientific evidence before fully integrate TCM or TIM into their clinical practice (Abuduli et al., 2016; Asadi-Pooya et al., 2021; García-Escamilla et al., 2016; Phutrakool & Pongpirul, 2022). P11 and P17 expressed ongoing doubt about the scientific evidence for herbal medicine, even after attending an educational seminar. Their response suggested that the exposure to information alone particularly regarding herbal medicine is not sufficient to shift their opinions, especially when concerns persist about the standardization, safety, and dosage of these treatments at an individual level. For

instance, P11 remained unconvinced by the seminar content, emphasizing the lack of strong empirical evidence.

“I would say they still not much evidence. And after hearing the talk the other day, I'm totally not convinced at all.” [P11]

The scepticism expressed by P11 is understandable, but it also reflects something worth examining. When participants asked for clear scientific evidence, they were applying the evaluative criteria of single-compound pharmacology to a system that does not operate on those terms. Conventional Western medicine is built on a reductionist model: one isolated chemical entity, one biological target, one measurable outcome, validated through standardised trials. This is the only evaluative lens most conventionally trained doctors have been given and applying it to TCM and TIM produces an inherently poor fit. TCM formulations are not constructed on the single-compound model. A Chinese herbal prescription is built according to the Jun-Chen-Zuo-Shi principle (君臣佐使, "monarch-minister-assistant-courier"), in which a principal herb targets the primary pattern, supported by herbs that reinforce its action, moderate toxicity, and direct the formula to the appropriate organ system (Yuan et al., 2016). Therapeutic effect arises from the synergistic interaction of multiple compounds on an individualised pattern, not from one molecule on one target. Testing a single herb in isolation will not capture this synergistic effect and may produce inconclusive results, not because the formula fails, but because the method does not fit the system being tested (Efferth

& Koch, 2011). Similarly, Ayurvedic formulations address constitutional imbalance across the three doshas, targeting the individual patient's presentation rather than a standardised diagnosis. Doctors who request double-blinded studies before recommending TCM are not wrong to want evidence; they are applying the right standard to the wrong unit of analysis. This conceptual mismatch helps explain why scepticism persisted even after the seminar. Despite this, the findings align with (Christina et al., 2019; Corina et al., 2016) who found that despite scepticism towards TCM and TIM, medical professionals (include medical doctors) were still willing and show openness toward these modalities for patients managing menopausal symptoms.

“Actually, you can try it. I’m open to it. Different patients respond differently. If someone doesn’t respond to Western medicine and they’re frustrated, they might want to try something else. If it’s good for their health and it helps, I think there’s no problem.” [P12]

Overall, attitudes toward traditional medicine among participants were positive. While many were open and even supportive of TCM and TIM integration, the depth of their support depended on perceived safety, scientific evidence, and personal understanding.

4.6.3.2 Professional Responsibility and Recommendation

Most participants suggested integrating TCM and TIM into modern medical practices particularly for managing menopausal symptoms. A common belief among participants were that recommending TCM or TIM is ethical, aligning with the medical principle of "do no harm." However, they also acknowledged that scientific validation and ethical considerations must be addressed to ensure patient safety and trust. The ethical concerns on herbal remedies are particularly relevant in cases where the ingredients and effects of herbal medicines are not well understood. For instance, long-term use of Chinese Herbal Medicine (CHM) with unclear formulations in patients may pose significant risks, especially when prescribed by individuals without formal TCM training (Zhang & Zhang, 2021). These concerns highlight the necessity for proper regulation, education, and standardized guidelines to ensure responsible recommendations.

Another important consideration raised by participants were patient autonomy. This aligned with the studies emphasizing the importance of patients' autonomy in healthcare and respecting their choices, demonstrating how acknowledging cultural contexts and social relationships fosters better patient engagement and autonomy (Entwistle et al., 2010; Subramani & Biller-Andorno, 2022). Therefore, medical doctors should offer more treatment choices, such as TCM and TIM, to address cultural preferences, build trust, and enable more holistic care during menopause. Participants emphasized the growing need for medical doctors to understand and

incorporate TCM and TIM into their practice to provide better rapport and care to menopausal women. P14 expressed the necessity for transparency in clinical communication, noting that while MHT is widely supported by scientific evidence, patients should also be informed about complementary options such as yoga and traditional medicine ensuring they can make informed decisions based on their needs and beliefs.

“As for me, the patient should be well-informed about the available treatment options. The choice should be left to the patient because they are the ones experiencing the symptoms.” [P14]

Most participants indicated that they felt ethical of advising patients who were interested in using TCM or TIM for managing menopausal symptoms. However, their recommendations were often general, such as recommending lifestyle practices but unwilling to recommend consumption of herbal medicine as primarily due to their limited in-depth knowledge of herbal treatments, which raised concerns about safety and potential drug-herb interactions with prescribed conventional medications.

“We do advise patients to go for, like, exercises, yoga. It's in our recommendation for menopausal symptoms relief.” [P21]

“I think acupuncture, moxibustion, tuina are acceptable options. For herbal

remedies they can be considered but should be careful. Safety is important, like liver function and drug interactions must be taken into account.” [P12]

This revealed that medical doctors should provide evidence-based guidance and recommendations at the same time also respecting patients’ rights to choose the treatment that aligns with their beliefs and comfort levels. Participants acknowledged the value of TCM and TIM practices but without sufficient knowledge or clinical guidelines.

4.6.4 Barriers of Integration

4.6.4.1 Safety and Trust

Concerns about the safety of herbal remedies, self-medication and monitoring were frequently raised by participants. While traditional medicine has been practiced for generations, there remains a gap in scientific validation, particularly concerning the efficacy and safety (Yuan et al., 2016). The scepticism expressed by participants aligns with existing literature, which highlights that some herbal substances may interact with modern medications or cause unintended side effects (Saini et al., 2022). Therefore, it is crucial to consult with qualified medical professionals or seek for licensed TCM or TIM practitioners, who have knowledge and experience to ensure safe and appropriate use (Wang et al., 2023).

P3 expressed hesitation in recommending TCM or TIM, particularly preferable non-consumable therapies such as acupuncture and yoga.

“I would recommend TCM or TIM to my patients in a way that does not involve oral consumption, like acupuncture from TCM or yoga from TIM. These therapies do not require patients to take anything orally, which is important because there is no proper monitoring for herbal medicines.” [P3]

P24 expanded on this concern by drawing comparisons to modern treatments, highlighting that ongoing monitoring (e.g., blood tests for organ function) is standard practice when starting any new therapy. They stressed that it’s acceptable for patients to seek TCM or TIM treatments, but with requirement of regular clinical follow-up.

“The only concern is the continuation of monitoring. If the patient starts a therapy, like detoxification or any herbs, it’s okay, as long as it relieves their symptoms, that’s good. But I would suggest continuous monitoring of the patient’s target organ functions like checking kidney and liver function. So, my concern with TCM and TIM, if patients choose it, fine, but there must be regular follow-up like that. That’s my concern.” [P24]

This perspective reflects a broader hesitation among medical professionals regarding the safety of herbal medicine, reinforcing the need for stricter regulations,

better education on herb-drug interactions, and enhanced communication between conventional and traditional medicine practitioners.

4.6.4.2 Challenges

Participants highlighted several challenges in integrating TCM and TIM into clinical practice. A major concern was the lack of standardization in herbal medicine, absence of scientific validation, and limited monitoring and regulation. These issues aligned with the challenges addressed such as lack of standardization for T&CM products and services, lack of integration at primary care, low private investment, lack of robust clinical evidence which further hinders their integration and acceptance among the medical doctors (Mao et al., 2022; Traditional and Complementary Medicine Division, 2023). All these challenges contributed to the hesitation among medical doctors to fully integrate TCM or TIM into their clinical practice.

“The government healthcare system is very penny-wise; every cent is spent only if absolutely necessary. So, there’s no budget, I don’t think they will invest in complementary medicine at all. Unless it’s self-pay, which is private sector.” [P4]

Another participant raised the issue of logistical challenges and accessibility, noting the current disconnect between traditional and modern healthcare services.

“As of now, I feel like it's detached. If patients want to choose to go to the sensei, the availability of them is only like, maybe in Ipoh one or two, maybe in Johor one. So, for them to get to their logistically, it's maybe not feasible. So, the accessibility to the facility is a big factor.” [P6]

Lack of scientific evidence was also viewed as a significant barrier, especially in the context of increasingly informed and curious patients.

“I think the scientific evidence would be a biggest challenge, because younger generation, explored a lot from Google. So, our role is to validate what they've read. But without solid scientific data, it's hard to do that, we need evidence to back it up.” [P18]

In addition, the overwhelming amount of knowledge required in learning TCM and TIM was another barrier to adopting TCM or TIM, especially in the context of managing menopausal symptoms.

“We already have so much modern medicine to learn and understand. Then I want to add on, like some traditional herbal stuff into it. It's like a new thing. So, we're already struggling with so many things to learn and so many

studies. So that's what I feel is a bit a lot for us to cope with.” [P2]

Some participants expressed scepticism toward TCM and TIM practices, often due to the subjective nature of patient feedback or outcomes and lack of structured monitoring systems, making them hesitant to recommend TCM and TIM especially herbal treatment. P14 acknowledged a common stigma within government hospitals, noting that many doctors lack familiarity with traditional medicine. They highlighted a misconception that referring patients to T&CM units.

“Many doctors are not well-versed regarding the option of traditional medication, because certain doctors believe that if refer to the T&CM unit, they will stop modern medicine, which is a misconception. TCM and TIM should combine together because modern medicine is treating disease, but the mind, body and soul for the patient can be treated by TCM or TIM.”
[P14]

Another issue raised was the lack of formal training and licensing in TCM or TIM among modern medical doctors. P17 explained how this limits their ability to safely and confidently incorporate such practices into their clinical practice. P17 emphasized that medical doctors are trained and certified particularly in modern medicine and therefore lack both the authority and competence to integrate traditional approaches.

“Our license is only to practice modern medicine. We’ve never received formal training or certification, so we don’t have the authority or confidence to include it in our practice.” [P17]

The participant [P17] further explained this with countries like India and Indonesia, where some practitioners obtain dual qualifications in both conventional and traditional treatments.

In conclusion, the integration of TCM and TIM into mainstream clinical practice faces multiple challenges, including the lack of standardized guidelines, limited scientific validation, insufficient monitoring, and low referral rates. These are further compounded by accessibility issues, funding limitations within the public healthcare system, and the absence of formal training and certification for medical professionals. Together, these barriers contribute to scepticism and restrict the broader acceptance and implementation of traditional practices in hospital settings.

Although these structural barriers persisted post-intervention, participants' framing of them shifted from outright reluctance to constructive concern. Pre-intervention, barriers were often cited as reasons to disengage entirely from TCM and TIM as a clinical option. Post-intervention, the same barriers were instead raised as conditions to be resolved before recommendation could occur, suggesting a shift from passive avoidance toward active problem-solving. This indicates that the seminar did not eliminate participants' concerns about regulation, training, or

referral infrastructure, but it changed how those concerns were held, from a justification for dismissal to a roadmap for what would need to be addressed for TCM and TIM to be more confidently integrated into conventional practice.

4.7 Summarize of Pre- and Post-intervention Findings

Table 4.9 presents a summary of pre- and post-intervention organizing themes under each global theme, highlighting the thematic changes observed following the intervention. Pre-intervention, acceptance was characterised by conditional openness: participants expressed general willingness toward TCM and TIM in principle but were unwilling to actively recommend due to low confidence, insufficient knowledge, and the absence of formal referral pathways. Post-intervention, the findings reveal a clear shift toward greater familiarity, deeper value recognition, and increased willingness to recommend, with participants viewing TCM and TIM not as alternatives but as complementary options that could enhance patient-centred care, particularly for patients contraindicated for conventional HRT. Their acceptance reflected reliance on professional responsibility and openness toward ethical principles such as patient safety, autonomy, and evidence-based practice. Although structural barriers including system limitations, lack of formal training, safety concerns, and limited referral infrastructure persisted, passive disinterest shifted toward active curiosity and a more informed stance among medical doctors toward TCM and TIM in menopause

management.

Prior to the intervention, participants' acceptance was characterised by conditional openness, with most holding positive attitudes but unwilling to actively recommend TCM or TIM due to insufficient knowledge and absence of referral pathways. Following the intervention, acceptance shifted toward greater willingness to recommend, particularly for patients contraindicated for conventional MHT/ HRT, grounded in evidence-based practice and patient autonomy, as further detailed in Table 4.11.

Table 4.9 Summarize of Pre- and Post-intervention by Global Themes

Global Themes	Pre-Intervention (Organizing Themes)	Post-Intervention (Organizing Themes)	Synthesis/ Thematic Change
Knowledge and Experience (Pre-Intervention); Knowledge (Post-intervention)	• Knowledge (Concepts/Principles, Types of TCM and TIM) • Limited Knowledge and Awareness • Sources of information (formal/informal) • Family and Peer Influence • Personal and Observational Experiences	• Familiarity (TCM/TIM) • Insights • Valuable	The seminar improved understanding and transformed perceptions from limited awareness to informed familiarity. Knowledge shifted from anecdotal to structured, evidence-informed perspectives.
Perceived Effectiveness and Suitability	• Symptoms and Treatment Preferences (Non-invasive treatment) • Treatment Perspective	• Treatment Perspective • Treatment Preferences (natural, non-invasive methods)	Medical doctors became more accepting of TCM/TIM as supportive rather than alternative treatments,

			valuing them for patient-centered care.
Acceptance and Professional Responsibility	• Attitude (positive, negative, sceptical) • Professional Responsibility (licensed practitioners, evidence-based validation, patient autonomy)	• Attitude (positive and open) • Professional Responsibility (ethical and professional considerations, acceptance, and recommendation)	Acceptance increased as provided with structured TCM/TIM information, however, doctors linked professional duty (Do no harm) with patient autonomy and evidence-based recommendation.
Barriers of Integration	• Safety and Trust Concerns (herbal content, monitoring, safety) • System and Knowledge Gaps (lack of training, facilities, referral)	• Safety and Trust Concerns • Challenges (Healthcare System limitation, personal and social challenges)	While barriers persisted, such as training and regulatory reform.

Source: Developed for current research

Based on Table 4.10, most participants showed limited or superficial knowledge of TCM and TIM prior to the intervention. Pre-intervention, awareness was largely confined to general TCM concepts such as Yin-Yang and acupuncture, which most participants attributed to cultural exposure or informal sources rather than formal medical training. Knowledge of TIM and Ayurvedic principles was notably absent among the majority of participants, with several reporting no prior awareness of Ayurveda or its clinical applications. Following the intervention, the majority reported gaining new knowledge particularly about acupuncture, herbal remedies, and three dosha principles in Ayurveda. Specifically, post-intervention participants were able to describe the role of Kidney Qi decline and Yin-Yang imbalance in menopausal physiology, explain acupuncture mechanisms and acupoint selection for vasomotor symptom management, and articulate the three dosha-specific menopausal patterns in Ayurveda, namely Vata, Pitta, and Kapha dominant presentations, and their respective management approaches, reflecting a shift from anecdotal and culturally transmitted awareness to clinically structured understanding. The seminar helped participants better understand treatment concepts or principles, modalities, and potential benefits with roles of TCM and TIM in managing menopausal symptoms. In this study, participants' responses were categorized as "Improved" if their post-intervention statements reflected increased detail, clarity, or confidence in explaining TCM and TIM concepts compared to their pre-intervention statements. Responses that showed no noticeable difference in content or understanding were categorized as "No Change."

Table 4.10 Effects of Intervention on the Participants' Knowledge

	Pre-Intervention (Quotes/Summary)	Post-Intervention (Quotes/Summary)	Effects
P1	"For TCM, I think I don't know, I know that it follows Yin and Yang. For TIM, I've no idea, no knowledge at all."	"Through seminars I know types of herbs and which acupoints or meridians would be effective."	Improved (Now know types of herbs....)
P2	"I don't know much, but I think there's is traditional herbal thing."	"It's definitely something new and something interesting to learn."	Improved (Learn something new)
P3	"For TCM, how exactly the Yin and Yang happen. I'm not so sure. Ayurveda, I heard about it, but I didn't explore into it further."	"I think as far as the 75% dynamic hearing, I did get a new knowledge."	Improved (New knowledge)
P4	"I can say my knowledge is just like a layman because we don't have much exposure about that."	"I think I definitely understand a bit more. Probably we will increase my acceptance. But more to a graduate shift, there's no convincing data."	Improved (Graduate shift)
P5	"The most familiar one to me is acupuncture, for TIM, I never encountered before."	"I think that is a new insight for me and knowledge yes is definitely a whole new world."	Improved (New insight)
P6	"I've been expose to TCM before, I'm not sure about TIM."	"Definitely gave me new knowledge, and regarding the management of TIM in menopause management."	Improved (New knowledge)
P7	"I do have knowledge on that little bit for Ayurveda, Chinese one, I do not have a proper knowledge."	"It actually gives me a better understanding. All something new for me, so some knowledge and ability."	Improved (Better understanding)
P8	"I'm not very sure. I've never explored it in depth. I've just heard people mention it, but it's very superficial."	"Kind of from beginning, I don't want it. But now, I was open to it. Cause a lot of things that I didn't actually know."	Improved (Now open to TCM & TIM)

P9	“I'm not sure about the type of TCM, I'm not too well versed on TIM, but I only know some certain herbals and superficially.”	“I think I understood menopause itself better. So, I think I learned a lot actually.”	Improved (Learnt a lot)
P10	“I don't have a good understanding; Generally, I would still consider my knowledge very basic knowledge with this area.”	“Definitely have better knowledge about it.”	Improved (Better knowledge)
P11	“I'm very well aware of what TCM and TIM.”	“It showed me how Ayurvedic and modern medicine can complement each other safely.”	Improved (Learnt complementary safely)
P12	“I understand the concept of TCM, but I don't know how it actually works or how to achieve it. I'm definitely not familiar with TIM either.”	“I feel all these are very helpful to help with menopause symptoms. Before that, I wasn't sure it could.”	Improved (Before that wasn't sure)
P13	“Is unfortunate that I don't have that much knowledge for both.”	“I'd gain new knowledge. I will carry through the rest of my medical journey.”	Improved (New knowledge)
P14	“Mostly they have used the herbs, but I'm not sure what.”	“Definitely, it gives me new knowledge.”	Improved (New knowledge)
P15	“Indian medicine, I think it's just a lot of spices, and plant herbs-based products for cooking.”	“Before I read that I did not know that these specific drugs or herbs. But now it's better.”	Improved (Better understanding)
P16	“I know TCM and TIM could help in menopausal symptoms, but I don't know the details and how.”	“I didn't know TCM and TIM in more detail. So, from the seminar, I can see there is benefit for all of that.”	Improved (Know more detail such as benefit)
P17	“I know the acupuncture as well as the Chinese herbal medicine...and Ayurvedic.”	“I have some increased understanding of the traditional medicine and what their usages are...”	Improved (Increased understanding)
P18	“I don't have much of the knowledge.”	“I don't know this could relieve menopause, so that was a new thing for me.”	Improved (New thing)
P19	“For TCM, I'm not so sure. I have intermediate knowledge of Ayurveda.”	“Yes, I've gain new knowledge.”	Improved (New knowledge)

P20	“Lack of knowledge...”	“I now understand these treatment approaches better.”	Improved (Better understanding)
P21	“I don't have sufficient knowledge on this part of the TCM and TIM.”	“I think that's something new that I learned.”	Improved (Something new)
P22	“I don't know, to be honest. I know I'm not too sure.”	“Give me insight. Give me knowledge. It actually gives a high opener for me.”	Improved (Insight, knowledge)
P23	“Lack of my knowledge on TCM and TIM.”	“Yeah, a lot of good insight.”	Improved (Good insight)
P24	“My knowledge of traditional medicine is very limited.”	“New insights on TCM and TIM. Before the seminar, I had zero, no knowledge.”	Improved (New insights)
P25	“I don't have the knowledge.”	“Yes, I gained new insights. Now, I feel more informed to explain how TCM and TIM can help relieve symptoms.”	Improved (New insights)

Source: Developed for current research

Based on Table 4.11, before the seminar, many participants expressed low to neutral confidence in recommending TCM or TIM, due to lack of knowledge and concerns about safety and needs of evidence. Several participants explicitly stated they would not recommend these modalities without formal training or clinical guidelines to support their decisions. The effects of the intervention on participants' acceptance were categorized based on self-reported confidence levels in recommending TCM and TIM with pre- and post-intervention quotes were supplemented with participants' numerical confidence ratings (ranging from 1 = not confident to 5 = very confident). Post-intervention most participants showed a positive shift from neutral (3/5) to more confident levels (4 to 5/5). A few remained non-recommending due to ongoing professional or regulatory constraints rather than knowledge gaps. The overall shift showed increased acceptance and willingness to recommend, particularly were supported by evidence-based practice or patient preference. The link in between acceptance and confidence in recommending TCM/TIM was aligned with the study Baier and Stüber (2010) where acceptance of recommendations was driven by intention to use and actual usage behaviour and with Pavlovic et al. (2022), who highlighted that confidence in recommending healthcare interventions is rooted in the provider's trust in their safety and effectiveness. In the current study, recommendation becomes an observable behaviour that reflects acceptance. It is noted that these ratings reflect participants' self-reported qualitative confidence as part of the phenomenological inquiry, consistent with the qualitative design of this study.

Table 4.11 Effects of Intervention on the Participants' Acceptance (Confidence in Recommendation)

Participants	Pre-Intervention (Quotes/Summary)	Post-Intervention (Quotes/Summary)	Effects
P1	"We usually try to treat with Western medicine, I'm not confident in recommending traditional treatments."	"I think probably (4/5) confidence level in recommending these treatments."	Improved (Not confident →4/5)
P2	"I would say neutral (3/5) in confidence level, even if I confidently suggest, I still will choose my patients."	"I'd say (4.5 /5). I feel confident, but I think I need to support my recommendations with research."	Improved (3/5 →4.5/5)
P3	"I recommended acupuncture for stroke but not TCM and TIM, if no monitoring. I'll choose neutral (3/5) in confidence."	"I'll rate (5/5) very confident. I'm confident enough to recommend, but that depends on the patient condition."	Improved (3/5 →5/5)
P4	"So far, I cannot recommend it and I'm not confident."	"I'll pick (3/5) because I think it's not in my positions to recommend this."	Improved (Not confident →3/5)
P5	"I can recommend it, but if it's something I've never tried before, I'd rate my confidence around (2-3/5)."	"I'll rate (4/5) for external treatment but (3/5) for herbal medicine, I won't very like, proactively recommend them."	Improved (2-3/5 →3-4/5)
P6	"I wouldn't recommend yet, my level of confidence, I think for now is neutral (3/5)."	"I'll go for (4/5) confident. But to be very confident, I have to further study."	Improved (3/5 →4/5)
P7	"I'm not really confident. If I had more knowledge, I would definitely recommend it. I'd rate my confidence around (3-4/5)."	"I'll rate (5/5), for both TCM and also TIM in recommending these treatments."	Improved (3-4/5 →5/5)
P8	"I've recommended acupuncture for migraines before. I'd rate my confidence at (4-5/5), it depends on the illness and the symptoms."	"I will take (4/5). The ones I've read were somewhat convincing; it seems to be prevention than cure."	Remained Confidence (4-5/5 →4/5)

P9	“I do not want to recommend something that I have not learned fully. I think I’d rate (2/5) for my confidence.”	“I’d rate my confidence as (4/5), because I’m still learning and relatively new to it, but I do feel quite confident.”	Improved (2/5 →4/5)
P10	“I’m not terribly confident, maybe (2/5), I’m not too confident with recommending people for the treatment.”	“I’d say around (4/5) compared to before, when I knew very little. I’m definitely more confident now, for both.”	Improved (2/5 →4/5)
P11	“I wouldn’t recommend it.”	“I will not recommend. But if you ask me, between TCM and Ayurvedic, my take is still Ayurvedic.”	Remained not recommend (Not recommend →Not recommend)
P12	“I’m open to other alternative treatments. I will rate confidence between (3-4/5).”	“I think (4/5), confident. More understanding can offer as an alternative.”	Improved (3-4/5 →4/5)
P13	“I’ve recommended menopausal women to T&CM unit at Hospital Putrajaya. I only know a bit related to breastfeeding. So, my confidence is around (1/5).”	“I would say (4/5). I’ve gone through the seminars, but I’m not saying 5, because I’m not licensed.”	Improved (1/5 →4/5)
P14	“I will just (3/5) because I’m not a trained person to prescribe.”	“I’ll say (4/5) confident. Based on the data and I have patient is doing the acupuncture and become more better.”	Improved (3/5 →4/5)
P15	“I think I will be around (3/5) because we don’t know a lot of things.”	“I feel (4/5) confident, because we have evidence-based articles to show to my patients.”	Improved (3/5 →4/5)
P16	“I think for me is confident, maybe 4...”	“I’d rate my confidence as (4/5). I’m confident because I understand the benefits, both externally and internally.”	Remained confidence (4/5 →4/5)
P17	“I didn’t recommend. If could not treat, referred to hospital... not simply refer to which you don’t have knowledge about.”	“There’s no question of confidence. We don’t have any knowledge in that area to either advise for or against it.”	Remained not recommend (Not recommend →Not recommend)

P18	“I will be on neutral (3/5) because I don't have much of the knowledge and I never see them probably it's available.”	“I would say (4/5), because I really to go through the thing a few times for me to get familiarized with it.”	Improved (3/5 →4/5)
P19	“I will always tell them, there are alternative options for them. I'm confident and rate (4/5).”	“Maybe (4.5/5) like that for my confidence but depending on the patient.”	Improved (4/5 →4.5/5)
P20	“I wouldn't recommend it because I'm not sure how far it is backed by science. I'll rate (2/5), not confident.”	“Maybe (3-4/5) confident. I already know how, what treatments but I don't see any like case evidence of it in person. ”	Improved (2/5 →3-4/5)
P21	“I wouldn't recommend something I'm not familiar with. I'd rate my confidence at around (2/5), not confident.”	“I will rate (3-4/5) confident. Because most of the time my knowledge on TCM or TIM is quite superficial.”	Improved (2/5 →3-4/5)
P22	“Recommended black cohosh and St. John's wort. I'm neutral (3/5), we can't deny that the value of traditional medicine.”	“I'll rate (3/5), neutral, but beyond my evidence, prescribed. I do recommend it, especially for patients who can't take HRT.”	Remained Neutral (3/5 →3/5)
P23	“Ministry has become more accepting. The issue is lack of knowledge. I'm not confident.”	“I have some knowledge, but not in-depth. I'd rate my confidence as (4/5) because I'm inclined toward TCM and TIM.”	Improved (Not confident →4/5)
P24	“I'd rate my confidence as (3/5), neutral. I can't deny something I do not have knowledge on.”	“I'd rate my confidence as (4/5). The explanations were clear.”	Improved (3/5 →4/5)
P25	“I'm not comfortable in recommending. I would say I would be neutral (3/5).”	“I'll rate (5/5), very confident. But I need the source like to who I need to refer to.”	Improved (3/5 →5/5)

Source: Developed for current research

4.8 Chapter Summary

This chapter explored the findings on the knowledge, perceptions, and acceptance of TCM and TIM among Malaysian medical doctors in managing menopausal symptoms. Initially, participants had limited knowledge and scepticism toward TCM/TIM, primarily relied on conventional medical treatments such as MHT/HRT, with limited exposure to traditional or alternative treatments however the interventional seminar significantly enhanced their understanding and acceptance. Post intervention, medical doctors expressed a growing willingness to learn more about TCM and TIM, acknowledging its potential benefits for patients seeking TCM and TIM options. Despite this increased acceptance, concerns about scientific validation, regulation, and safety issues of oral consumptions of herbal medicine remained. Participants emphasized the importance of scientific evidence, clear guidelines, and policy support to facilitate integration of TCM and TIM. Overall, this chapter highlighted the gradual increase in knowledge and acceptance of medical doctors toward TCM and TIM, emphasizing the role of education in bridging the gap between modern and traditional medicine.

CHAPTER 5

CONCLUSION

5.0 Chapter Overview

This chapter presents the conclusion of this study. Section 5.1 summarizes the major findings of this study, focusing on medical doctors' knowledge and acceptance of TCM and TIM in managing menopausal symptoms. Section 5.2 discusses the implications of the findings for healthcare management, policymakers, and the theoretical implications for the integration of TCM and TIM in managing patients' menopausal symptoms. Section 5.3 outlines the limitations of the study and provides suggestions for improving future research design. Lastly, Section 5.4 provides the overall conclusion of the study.

5.1 Summary of Major Findings

This study highlighted that majority of the participants were having limited product knowledge and conceptual understanding of TCM and TIM before the educational intervention seminar. Many participants admitted that they were unfamiliar with the principles, treatment modalities that are used for menopause management, and safety profiles of TCM and TIM. After intervention, there were improvements in

knowledge and attitude in confidence for recommendations of TCM and TIM. Hence this showed that having knowledge of TCM and TIM is important for medical doctors, when treating patients with menopausal symptoms. This could enhance medical doctors' ability to offer a broader range of treatment options and provide more holistic care to menopausal women. When doctors have adequate knowledge, they feel more confident and willingness in discussing these TCM and TIM treatments with menopausal patients, enabling holistic care tailored to individual preferences and conditions.

Another key finding was the heavy reliance on informal sources of information about TCM and TIM. Participants frequently reported learning about these practices from family, friends, social media, or patients themselves, rather than from evidence-based guidelines or formal education. This unstructured form of learning increased familiarity with specific modalities but often led to misconceptions or incomplete understanding particularly when recommending traditional therapies for menopausal women.

The study also found that most participants had minimal formal training in TCM/TIM, during their medical education. Most doctors hesitate to recommend these treatment options to menopausal women. The lack of reliable scientific evidence, clinical trials, and regulated practice frameworks further leading to their reluctance in recommendations.

In terms of clinical practice, participants expressed ethical issues and safety concerns regarding TCM and TIM. Many were reluctant to recommend these therapies due to uncertainties surrounding herb-drug interactions, lack of standardization of traditional medicine, lack of safety monitoring. Doctors are concerned on the legal and ethical implications of referring patients to TCM/TIM, even when they saw potential benefit. This concern was further compounded by the presence of uncertified T&CM practitioners.

Additionally, there was doctors' confidence to recommend non-invasive therapies, such as yoga, acupuncture, tai chi, and massage. These modalities were viewed as safer, more acceptable, and easier to explain to patients compared to herbal remedies. Many participants indicated that they would feel more comfortable recommending these therapies as part of lifestyle changes for menopausal women.

Finally, the study highlighted a growing acceptance of TCM/TIM if provided that the treatments were evidence-based and the certified practitioners. Despite these concerns, participants recognized the cultural relevance and respected patient choice for these therapies. They emphasized the importance of developing clinical guidelines, certified T&CM practitioners, and evidence-based research to support safe integration which highlighted the need for more clinical research and scientific evidence, as participants continued to express hesitation without data to support the efficacy and safety of TCM/TIM treatments. Table 5. 1 shows the summary of major findings and their implications.

Table 5. 1 Summary of Major Findings and its Implications

Research Objective (RO)	Major Findings	Implications		
		Practical (Management)	Practical (Policymakers)	Theoretical
RO1 (KW)	Limited product knowledge and conceptual understanding of TCM/TIM	Hospital Professional (CPD) Units can organize structured training workshops, campaigns, seminars	T&CM Division, Ministry of Health (MOH) Malaysia should incorporate TCM/TIM modules into CPD for medical professionals	Shows gap in Product Knowledge and Intervention Coherence
RO1 (KW)	High reliance on informal sources (family, social media)		Ministry of Health (MOH) Malaysia can develop patient-safe educational content share on social media platforms	Indicates reliance on informal sources that shows high familiarity within specific TCM/TIM modalities
RO1 (KW)	Minimal formal training in TCM/TIM		Ministry of Higher Education (MOHE) and Malaysian Medical Council (MMC) should integrate TCM/TIM into medical education	
RO1 (ACC)	Ethical and safety concerns (e.g. monitoring), lack of confidence in recommendation	T&CM practitioners should draft standard protocols for referral and safety practices	T&CM Division, NPRA (National Pharmaceutical Regulatory Agency) should enforce herbal product standards and in terms of safety monitoring, establish a national TCM/TIM adverse event reporting system integrated into the Malaysia Health Data Warehouse (MyHDW)	

RO2 (KW)	Improved familiarity and understanding of TCM/TIM concepts and practices	Hospital Training Units conduct cross-training for TCM/TIM and conventional sharing sessions	Conducting Continuing Medical Education (CME) training programs helps improves the expertise of medical professionals, and also supports the Government's policy of promoting and integrating TCM/TIM to western medicine	Reflects increased Familiarity and Product Knowledge
RO1/RO 2 (KW)	Greater familiarity with TCM than TIM	TCM and Ayurveda centres can collaborate by organizing expert talks to introduce and promote the benefits of the TCM and TIM	T&CM Division under the Ministry of Health (MOH) Malaysia should adopt a balanced and culturally for both TCM and TIM in its policy planning, and public health promotion	
RO2 (ACC)	Confidence in recommending non-invasive therapies (e.g., yoga, acupuncture)	Specialist Clinics (e.g., O&G, Menopause Clinics) can include these options in lifestyle advice	Ministry of Women, Family and Community Development (KPWKM) and Malaysian Menopause Society (MMS) can recommend safer TCM/TIM options for menopause management	
RO2 (ACC)	Increased acceptance of TCM/TIM as alternative/complementary	Promote guideline-based complementary use for menopause management	MOH Clinical Practice Guidelines Unit should update guidelines to include TCM/TIM where appropriate	
RO1/ RO2 (ACC)	Emphasize the need for clinical and scientific evidence	Hospital Research Units, TCM/TIM Centres can collaborate on clinical audits and shared case reviews	Malaysian Menopause Society (MMS), Obstetrical and Gynaecological Society of Malaysia (OGSM) collaborate with T&CM Division Malaysia should develop Clinical	

			Practice Guidelines: Management of Menopause in Malaysia incorporating with the use of TCM/TIM
			Academy of Medicine Malaysia (AMM) and MOH Research Division should fund and share clinical research evidence
RO1/RO 2	Concern uncertified T&CM practitioner	Provide staff and patients with access to verified T&CM referral directories	Ministry of Health Malaysia (MOH) - should create an official online portal similar to the Malaysian Medical Council's (MMC) site that easily check if a T&CM practitioner is registered which could enforce practitioner licensing

Source: Developed for current research

Note: KW = Knowledge; ACC = Acceptance

5.2 Research Implications

The findings of this study provide implications into three domains including management, policymakers, and theoretical, especially in enhancing the integration of TCM and TIM into clinical care for menopausal women.

5.2.1 Practical Implications (Management)

5.2.1.1 Training Development

Hospital management should emphasize structured training and Continuous Professional Development (CPD) on TCM and TIM in the context of managing menopausal symptoms. The study showed that improved knowledge and familiarity significantly increased doctors' willingness and confidence in recommending or discussing TCM/TIM with menopausal patients. Institutions can implement workshops, seminars, or campaigns to strengthen doctors' expertise and self-efficacy (under TFA). For instance, according to T&CM annual report 2023, the Traditional and Complementary Medicine Division (T&CMD) successfully organised and accredited CPD sessions on T&CM services 'Traditional Chinese Medicine and Mental Health Care' webinar series and an 'Oncology Acupuncture' program, specifically targeting and raising awareness among government medical officers and other health personnel (Traditional and Complementary Medicine Division, 2023).

Moreover, T&CM Units or TCM and Ayurveda centres can collaborate by organizing programs, such as workshops, expert talks, or seminars, to introduce and promote the use of both TCM and TIM such that menopausal symptoms management or maintaining body health. This helps reduce the gap in familiarity to TCM and provided opportunities to learn about TIM practices like Ayurveda, Siddha, and Unani.

5.2.1.2 Interdisciplinary Collaboration at Institutional Level

Hospital management unit should help build partnerships between medical professionals and certified T&CM practitioners. This will give doctors more chances to see and learn about traditional practices in real-life settings, such as through clinical case discussions, or shared patient care. These collaborations can help doctors better understand traditional medicine and build trust between the two systems, leading to better care for patients.

5.2.2 Practical Implications (Policymakers)

5.2.2.1 Integration into Medical Education

Ministry of Higher Education (MOHE) and Malaysian Medical Council (MMC) should collaborate to incorporate TCM/TIM modules into undergraduate and postgraduate medical syllabus. The study showed that many doctors unwilling or unprepared to recommend TCM/TIM due to lack of formal education, highlighting a need for medical education.

5.2.2.2 Development of National Clinical Guidelines

Ministry of Health (MOH) and relevant professional bodies (e.g., OGSM, MMS, T&CM Division) should collaborate by developing clinical practice guidelines for menopause management incorporating TCM and TIM. These guidelines should cover safety, effectiveness, herb-drug interactions, quality control, and when to refer patients. This will help doctors make informed decisions in their practice.

5.2.2.3 National Adverse Event Reporting for TCM/TIM

The Ministry of Health Malaysia (MOH) should establish a national TCM/TIM adverse event reporting system integrated into the Malaysia Health Data Warehouse (MyHDW). This centralized platform would allow healthcare providers,

TCM/TIM practitioners, and patients to report adverse events in a standardized way, enabling real-time monitoring, early detection of safety issues, and timely regulatory action. Integrating safety data into MyHDW would also strengthen evidence for clinical guidelines, improve practitioner training, and enhance public trust in the safe use of TCM and TIM.

5.2.2.4 Promote Equitable Visibility

The T&CM Division, MOH Malaysia should promote equitable visibility and inclusion of both TCM and TIM in national policy, education, and integration efforts. For example, public campaigns or professional guidelines could include case examples from both traditions, and national T&CM registries should provide balanced access to certified practitioners of both TCM and TIM.

5.2.2.5 Digital Platforms for Public Access

To protect public safety and build trust in TCM and TIM, the Ministry of Health Malaysia (MOH) should create an official, user-friendly online portal similar to the Malaysian Medical Council's (MMC) site that lets the public easily check if a T&CM practitioner is registered. The current system is manual and time-consuming. A more accessible registry would help people avoid unqualified

practitioners and encourage proper registration in Malaysia.

5.2.2.6 Research and Training Funding with Policy Support

Government or Non-Governmental Organization (NGO) should provide funding for conducting training and research especially in terms of safety and effectiveness on TCM and TIM for menopausal symptoms management. Funding should support structured training programs for medical professionals, ensuring that doctors receive practical, evidence-based education on TCM and TIM as part of their Continuous Professional Development (CPD). While for research studies can help shape future guidelines, improve training for medical professionals, and decisions of integration TCM and TIM into the national healthcare system.

5.2.3 Theoretical Implications

5.2.3.1 Knowledge Constructs Influence Acceptance and Integration

The study showed that product knowledge (understanding of TCM/TIM), familiarity (prior exposure), and expertise (depth of practice confidence) are influencing doctors' willingness to recommend TCM and TIM for menopausal symptoms management. These constructs suitable for future research examining healthcare professionals' acceptance to integrate T&CM in mainstream healthcare system.

5.2.3.2 Familiarity from Social Influence

The findings showed that familiarity with TCM and TIM was shaped by social influence, such as friends' opinions, family tradition, cultural background. This often played a critical role in shaping participants' openness toward traditional treatments, even when the absence of formal education or clinical guidelines. These suggest that social and cultural influences contribute to acceptance and should be considered when applying or expanding the TFA in future research on healthcare integration.

5.3 Research Limitation and Recommendations

Every study should have its limitations but some limitations that could not be ignored. Below are the limitations of this study with its future recommendations:

5.3.1 Short Duration of the Intervention Seminar

The interventional seminar that conducted in this study was quite short with a duration of 2 hours in total, with one hour for TCM and one hour for TIM. Due to the limited time frame, both TCM and TIM experts were not able to explain everything in detail about how TCM and TIM can relieve and manage with menopausal symptoms. However, the presentation slides did include some basic principles and treatment options, and the experts tried to explain how these treatments work to relieve menopausal symptoms but without the practical trial, therefore, participants might be doubtful on clinical practice. Hence, future research may consider extend the duration of the seminar such as 3 day workshop (Wong et al., 2019) or two weeks of web-based training (Wei et al., 2019).

5.3.2 Short Duration of Follow-Up Interviews

The duration for second interviews were, on average, only about half as long as the first ones. While this might suggest that participants became more confident, clear in their responses after the intervention or time gap in between the first and second interview was around 5 weeks, it also means participants still remembered their initial answers, many tended to give similar or repetitive responses, rather than offering new reflections. Hence, it is recommended that future post-intervention interviews should be conducted with either a longer time gap such as at 3 months (Wei et al., 2019) to allow for more changes in perspective or designed more structured follow-up prompts to encourage participants to elaborate beyond their initial responses.

5.3.3 Participant Specialty

This study mainly focused on menopausal symptoms management, which was closely related to the field of Obstetrics and Gynaecology (O&G). However, based on the demographic data showed that only 16% of participants were from O&G, which may have affected limiting in detail of clinical relevance and feedback regarding menopausal symptoms management. Future research could focus specifically on O&G specialists to gain deeper insights into the integration of TCM and TIM for menopausal symptoms management.

5.3.4 Limited Clinical Exposure (Years in medical field)

Nearly half of the participants (48%) had only 3 to 5 years of experience in the medical field, and only 32% had over 10 years of experience. This junior may have had limited exposure to T&CM or menopausal cases. Future studies should include balanced number of participants with mix of junior and experienced doctors to gain diverse perspectives.

5.3.5 Influence of Ethnicity on Familiarity with TCM and TIM

Another limitation of this study relates to participants' cultural background and ethnicity. As TCM has long been practiced and transmitted within Chinese communities, Chinese participants may have been more familiar and comfortable with TCM concepts compared to other ethnic groups. Similarly, Indian participants may have had greater prior exposure to and understanding of TIM. This difference in baseline knowledge and cultural familiarity could have influenced the level of engagement, perceived relevance, and responses during both the seminar and the interviews. Future research should consider stratifying participants by ethnicity, in order to better capture the independent effect of the intervention.

5.3.6 Lack of Assessment on the Training Impact as a Mediating Variable

This study did not directly assess how the intervention influenced changes in attitudes, confidence, acceptance or behaviours. The seminar component could serve as a mediating factor between exposure to TCM/TIM and behavioural outcomes such as willingness to recommend these modalities. Future research should incorporate models by employing quantitative methods that evaluate the mediation effect of intervention quality and delivery on knowledge and clinical application. This would clarify the intervention effectiveness in practice.

5.4 Chapter Summary

Overall, the key findings were summarized and discussed to highlight medical doctors' knowledge, and acceptance of TCM and TIM in managing menopausal symptoms. Practical implications were pointed out to assist medical professionals, medical educators, policymakers, and T&CM practitioners in improving the integration of TCM and TIM into clinical settings. On the other hand, theoretical implications were discussed for future researchers to consider when designing studies involving T&CM.

In conclusion, the thematic framework of this study revealed four global themes: (1) knowledge of TCM and TIM, (2) perceived effectiveness and suitability of

TCM and TIM, (3) acceptance and professional responsibility, (4) barriers to integration including lack of knowledge and resource and facilities support. In addition, this study also revealed that the positive shift in knowledge and confidence (acceptance) but remains in hesitation to recommend particularly herbal medication after attending intervention seminars. These findings could serve as a valuable reference for future researchers, healthcare management and policymakers seeking to enhance the role of T&CM in menopause care and broader treatment availability.

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Appendix A: Research Instrument (1st Online Interview)

Project title: Acceptance and Knowledge of Traditional Chinese Medicine and Traditional Indian Medicine among Medical Doctors in Malaysia for Managing Patients' Menopausal Symptoms

Knowledge and Acceptance

1. Do you know about T&CM practices (Traditional Chinese Medicine [TCM], Traditional Indian Medicine [TIM])?
NO (Thank you)
YES (Can you please name which one do you know?)
 - a. Have you seen any promotions/ flyers/ notifications of TCM/TIM (e.g., Facebook, TikTok, newspaper, TV) related on T&CM practices?
 - b. Have you seen the TCM/TIM centre near your workplace/residence?
2. Is there any development in the use of T&CM practices in treating different symptoms/illness (probe by naming the symptoms only if needed) as compared to years ago?
NO
YES (Explain the developments/ changes/ trends)
3. Do you have any personal experience with the TCM/TIM?
NO
YES (Explain)
4. Do you know TCM/TIM could be used to relieve menopausal symptoms?
NO
YES (Name the available T&CM treatments)
5. Do you have any family members/relatives/friends used TCM/TIM to relieve symptoms of menopause?
NO
YES (Explain)
6. Have you attended any workshops/training programs/courses related to:
 - a) TCM/TIM (No/ Yes; If yes, name the sessions attended and answer q6b)
 - b) T&CM in reducing menopause symptoms? (No/ Yes; If yes, name the sessions attended)Note:
 - For those answered Yes for Q6a and Q6b, did you get clinical exposure?
 - For those answered No for Q6a and Q6b, may I know why you never attended before?Do you plan to join the training in the future?

7. Do you have any additional qualifications which enable you to provide for TCM/TIM treatments?
NO
YES (name them)
8. Have your colleagues/ friends/ medical professionals recommended TCM/TIM to you for reducing menopausal symptoms before?
NO
YES (who are they? What did they recommend?)
9. Have you recommended anyone to TCM/TIM to manage symptoms of menopause?
NO (why, didn't you?)
YES (how long have you been recommending? Whom did you recommend?)
10. As a medical doctor, do you think it is wise to recommend TCM/TIM to your patients experiencing menopause symptoms?
NO (what about scientifically proven treatments?)
YES
11. How confident are you in recommending TCM/TIM treatments/ practitioners to your patients? *Rate on a given scale (1=not confident at all, 2=not confident, 3=neutral, 4=confident, 5=very confident)*
12. Is TCM/ TIM suitable to be an alternative treatment in relieving menopausal symptoms?
NO (Probe them to justify)
YES (Probe them to share their experiences; emphasize on their confidence)
13. How effective TCM/TIM treatments are in relieving menopausal symptoms?
Rate on a given scale (1=not effective at all, 2=not effective, 3=neutral, 4=effective, 5=very effective)
14. How do you feel about the use of TCM/TIM for treating menopausal symptoms?
Rate on a given scale (1=very bad, 2=bad, 3=neutral, 4=good, 5=very good)
- 15a. Do you have adequate resources (time, money, and effort) to gain formal knowledge about TCM/ TIM for treating menopausal symptoms?
NO (which resources are you lacking?)
YES
- 15b. Do you think it is worth using your resources (time, money, and effort) to learn about TCM/TIM treatment for menopause symptoms?
NO (why?)
YES (why?)

16. Do you know the principles of how TCM/ TIM works on treating menopausal symptoms.
NO (probe: TCM- Ying and yang (balance), TIM – Vata, Pitta, Kapha)
YES (explain the principles)

Research Instrument (2nd Online Interview) Knowledge and Acceptance

1. Do you know TCM/TIM could be used to relieve menopausal symptoms?
NO
YES (Name the available T&CM treatments)
2. As a medical doctor, do you think it is wise to recommend TCM/TIM to your patients experiencing menopause symptoms?
NO (what about scientifically proven treatments?)
YES
3. How confident are you in recommending TCM/TIM treatments/practitioners to your patients? Rate on a given scale (*1=not confident at all, 2=not confident, 3=neutral, 4=confident, 5=very confident*)
4. Is TCM/ TIM suitable to be an alternative treatment in relieving menopausal symptoms?
NO (Probe them to justify)
YES (Probe them to share their experiences; emphasize on their confidence)
5. How effective do you think TCM/TIM treatments are in relieving menopausal symptoms? Rate on a given scale (*1=not effective at all, 2=not effective, 3=neutral, 4=effective, 5=very effective*)
6. Do you think it is worth using your resources (time, money, and effort) to learn about TCM/TIM treatment for menopause symptoms?
NO (why?)
YES (why?)
7. Do you know the principles of how TCM/ TIM works on treating menopausal symptoms.
NO (probe: TCM- Ying and yang (balance), TIM – Vata, Pitta, Kapha)
YES (explain the principles)

Appendix B: Expert Validity Assessment Form

Instruction:

Here are some statements related to the instrument that has been evaluated. After examine, please mark (✓) in the relevant box.

No.	Statement	Acceptability	
		Correct	Need to be amend
1.	Correct use of domain		
2.	Instrument format		
3.	Clarity of the meaning of each item		
4.	Language compatibility		
5.	Appropriate font size		
6.	Clarity of instructions received		
7.	Use of text spacing		
8.	Indications for measurement scales		
9.	Clarity of instrument objectives		
10.	Correct spelling		

General comments:

Signature :

Name :

Date :

Appendix C: Participant Consent Form

INFORMATION SHEET AND CONSENT FORM

A Qualitative Online Interview Sessions and Attending an Interventional Online Seminar on the Managing Patients' Menopausal Symptoms Using Traditional Chinese Medicine and Traditional Indian Medicine

Thank you for participating in this research titled “**Acceptance and Knowledge of Traditional Chinese Medicine and Traditional Indian Medicine among Medical Doctors in Malaysia for Managing Patients' Menopausal Symptoms**”. This study aims to explore the acceptance and knowledge of medical doctors on Traditional Chinese Medicine and Traditional Indian Medicine on managing menopausal symptoms in Malaysia. Your participation in this study is highly appreciated. Feel free to ask the researcher if you have any questions. **You must be registered with Malaysia Medical Council (MMC) in order to participate in this study.** By signing the consent form, you indicate complete understanding and agreement of the letter's contents.

Participation in this study consists of interviewing on your experience, perspectives, views on Traditional Chinese Medicine and Traditional Indian Medicine for managing menopausal symptoms in Malaysia. The interview will be conducted online via Microsoft Teams and audio- recorded to analyse the content in regard to the aim of this study. Two interview sessions will be conducted with approximately 40-60 minutes each. The first interview will be conducted upon registering to participate in the seminar. After that, an interventional online seminar session by Traditional Chinese Medicine and Traditional Indian Medicine experts on the use of Traditional Chinese Medicine and Traditional Indian Medicine for managing menopausal symptoms will be conducted. This will be followed by the second interview session to access the changes of the knowledge and acceptance in using Traditional Chinese Medicine and Traditional Indian Medicine for managing menopausal symptoms among medical doctors in Malaysia.

Risks or discomfort:

No risks or discomforts other than fatigue are anticipated. However, if you do feel any discomfort, you can terminate your participation at any time during the session, and no adverse action will be taken against you.

Confidentiality:

Your part in this study is confidential. None of the information you provide, nor the audio recordings will be released or used except for the purpose of this study, and no identifiable information will be released at any time. Your

responses and the audio recordings will only be viewed and handled by the researchers.

Decision to quit at any time:

The decision to participate in this study is entirely voluntary and you may quit anytime. You will not be penalized for this decision. If you wish to quit, please let the discussion lead know and you will be released from the session immediately.

Rights and Complaints:

If you have doubts or are not satisfied with how this study is performed, you may discuss your complaints with the researchers. Please get in touch with the researchers if you would like to receive a copy of the results. Contacts are provided at the end of this consent form.

I understand that the Scientific and Ethical Review Committee (SERC), UTAR has reviewed and approved this research study. For research- related problems or questions regarding participants' rights, I can contact:

Scientific and Ethical Review Committee (SERC) Universiti Tunku Abdul Rahman

I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.

Participant signature: _____

Date: _____

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Consent Form

I sincerely appreciate your valuable time and willingness to meet with us today for this interview session. My name is Dr. Hemaniswarri Dewi A/P Dewadas (researcher) / Dr. Gengeswari a/p Krishnapillai (researcher) / Ms. Goh Sook Yan (Master's student and Research Assistant) from Faculty of Business and Administration (FBF), Kampar Campus, Universiti Tunku Abdul Rahman. I will be the interviewer for today's interview session. My research team is conducting this research study to explore the acceptance and knowledge of medical doctors on Traditional Chinese Medicine and Traditional Indian Medicine on managing menopausal symptoms in Malaysia. This interview session will focus on your experience, perspectives, views on Traditional Chinese Medicine and Traditional Indian Medicine for managing menopausal symptoms in Malaysia.

This interview session will last for 40-60 minutes and will be recorded to avoid missing any of your views. While notes will be taken during the session, it is challenging to capture everything in real-time. Therefore, we kindly request that you speak clearly and audibly during the session to ensure that the recording is clear and none of your valuable comments are missed.

All responses will be kept confidential. This means that your interview responses will only be shared with research team members, and we will ensure that any information we include in our report does not identify you as the respondent. Remember, you do not have to talk about anything you do not want to. The decision to take part in this study is purely voluntary. If you have been decided not to take part in this study, you may quit at any time and no adverse action will be taken upon your decision.

Are there any questions about what I have just explained? Are you willing to participate in this Online Interview and Interventional Online Seminar? If you agree, please sign in the below section.

I have read and understood the information provided to me. I have been given the opportunity to ask questions regarding this research and have had all my questions answered to my satisfaction. I voluntarily agree to participate in this study.	
Signature:	
Participant Name (Full Name as per IC):	
Date:	

Thank you for your time and effort.

PERSONAL DATA PROTECTION NOTICE

Please be informed that in accordance with Personal Data Protection Act 2010 (“PDPA”) which came into force on 15 November 2013, Universiti Tunku Abdul Rahman (“UTAR”) is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

1. Personal data refers to any information which may directly or indirectly identify a person which could include sensitive personal data and expression of opinion. Among others it includes:
 - a) Name
 - b) Identity card
 - c) Place of Birth
 - d) Address
 - e) Education History
 - f) Employment History
 - g) Medical History
 - h) Blood type
 - i) Race
 - j) Religion
 - k) Photo
 - l) Personal Information and Associated Research Data
2. The purposes for which your personal data may be used are inclusive but not limited to:
 - a) For assessment of any application to UTAR
 - b) For processing any benefits and services
 - c) For communication purposes
 - d) For advertorial and news
 - e) For general administration and record purposes
 - f) For enhancing the value of education
 - g) For educational and related purposes consequential to UTAR
 - h) For replying any responds to complaints and enquiries
 - i) For the purpose of our corporate governance
 - j) For the purposes of conducting research/ collaboration
3. Your personal data may be transferred and/or disclosed to third party and/or UTAR collaborative partners including but not limited to the respective and appointed outsourcing agents for purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is necessary to comply with applicable laws.

4. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.
5. UTAR is committed in ensuring the confidentiality, protection, security and accuracy of your personal information made available to us and it has been our ongoing strict policy to ensure that your personal information is accurate, complete, not misleading and updated. UTAR would also ensure that your personal data shall not be used for political and commercial purposes.

Consent:

6. By submitting or providing your personal data to UTAR, you had consented and agreed for your personal data to be used in accordance to the terms and conditions in the Notice and our relevant policy.
7. If you do not consent or subsequently withdraw your consent to the processing and disclosure of your personal data, UTAR will not be able to fulfill our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.
8. You may access and update your personal data by writing to us at.

Acknowledgment of Notice

- ☐ I have been notified and that I hereby understood, consented and agreed per UTAR above notice.
- ☐ I disagree, my personal data will not be processed.

.....

Participant's Name:

Date:

Demographic Details Form for Online Interview Sessions and Attending an
Interventional Online Seminar on Managing Patients' Menopausal Symptoms
Using Traditional Chinese Medicine and Traditional Indian Medicine

Participant Information:

1. Full Name as per IC:	
2. Age:	
3. Gender:	
4. Highest Education Level:	
5. Current Position: (Medical Officer/General Practitioner/Medical Specialist)	
6. Name of Hospital/ Clinic:	
7. Department:	
8. Race:	
9. Religion:	
10. Contact Number:	
11. Email Address:	

Consent and Authorization:

I, the undersigned, voluntarily provide the above demographic information for the purpose of participating in the Online Interview Sessions and attending an Interventional Online Seminar on managing patients' menopausal symptoms using Traditional Chinese Medicine and Traditional Indian Medicine. I understand that this information will be used for research purposes only and will be kept confidential.

Participant's Signature: _____

Date: _____

Thank you for participating in our interview session and attending interventional online seminar aimed at exploring the acceptance and knowledge of medical doctors of Traditional Chinese Medicine and Traditional Indian Medicine for managing menopausal symptoms in Malaysia. Your insights are invaluable and will contribute to gaps of knowledge and acceptance of medical doctors. We hope you find the token of appreciation rewarding and thank you once again for your time and insights.

By signing below, you confirm that you have received the token of RM 250 as appreciation upon participating in the 2nd interview session.

Participant's Name: _____

Participant's Signature: _____

Date: _____

**Appendix D: Participants' Responses and Total Scores on TCM and TIM
Post-Seminar Questions**

Participant	TC M: Q1	TC M: Q2	TC M: Q3	TC M: Q4	TI M: Q1	TI M: Q2	TI M: Q3	TI M: Q4	Total score
P1	0	1	1	1	1	1	1	1	7
P2	1	1	1	1	1	1	1	0	7
P3	1	1	1	1	0	1	0	0	5
P4	1	1	1	1	0	0	1	0	5
P5	1	1	1	1	0	1	1	0	6
P6	1	1	1	1	1	1	1	1	8
P7	1	1	1	1	1	1	1	1	8
P8	1	1	1	1	1	1	1	0	7
P9	1	1	1	1	1	0	1	1	7
P10	1	1	1	1	1	1	1	1	8
P11	1	1	1	1	1	1	1	0	7
P12	1	1	1	1	1	1	0	1	7
P13	1	1	1	1	1	1	1	1	8
P14	1	1	1	1	1	1	1	0	7
P15	1	1	0	0	1	1	1	0	5
P16	1	1	1	1	1	1	1	0	7
P17	1	1	1	1	1	1	1	1	8
P18	1	1	1	1	1	1	1	0	7
P19	1	1	1	1	1	1	1	0	7
P20	1	1	1	1	1	1	1	1	8
P21	1	1	1	1	1	1	1	1	8
P22	1	1	1	1	1	1	1	0	7
P23	1	1	1	1	1	1	1	1	8
P24	1	1	1	1	1	1	1	1	8
P25	1	1	1	1	1	1	1	1	8
								Average:	7.12
								Median:	7
								Mode:	7
								SD:	0.95