Australian Journal of Basic and Applied Sciences, 9(26) Special 2015, Pages: 1-8

ISSN:1991-8178

Australian Journal of Basic and Applied Sciences

Journal home page: www.ajbasweb.com

A Structural Model of Users' Attitudes towards Traditional and Complementary Medicine

[1]Yin Ling Adeline Tam, [2]Mui Ling Dyana, Chang and [3]NorazahMohd. Suki

[1,2]Centre for the Promotion of Knowledge and Language Learning, Universiti Malaysia Sabah, Kota Kinabalu, Sabah, Malaysia
[3] Labuan Faculty of InternationalFinance, Universiti Malaysia Sabah, Kota Kinabalu, Sabah, Malaysia

ARTICLE INFO

Article history:
Received 13 June 2015
Accepted 5 August 2015
Available online 12 August 2015

Keywords:
traditional and complementary medicine, efficacy, health awareness, structural equation model

ABSTRACT

Background: The increment of using Traditional and Complementary Medicine (TCM) by the general public has prompted the need to understand further the public's attitude towards the usage of TCM. However, many previous researches focused on using social-demographic factors to predict the use of TCM (Frass *et al*., 2012; Singh *et al*., 2004). **Objective:** This study aims to provide an overview of the utilization of TCM from the attitudes of consumers towards TCM. The objective of this study is to investigate the effects of users' attitudes, i.e. perceived safeness, perceived efficacy, perceived trust and health awareness, towards the feeling of TCM usage. **Method:** A self-administered questionnaire was distributed using convenience-sampling technique to the public over a period of one month in Labuan and Sabah, Malaysia. The data was collected from 288 respondents and was analysed using Structural Equation Modelling Approach. **Results:**Empirical results showed that perceived efficacy of TCM and health awareness have a positive relationship with the feeling of TCM usage. **Conclusion:** The findings of this study contributed significant importance to the practical industry application and future research.

To Cite This Article: Yin Ling Adeline Tam, Mui Ling Dyana Chang and Norazah Mohd. Suki., A Structural Model of Users' Attitudes towards Traditional and Complementary Medicine. ***Aust. J. Basic & Appl. Sci.***, *9(26): 1-8, 2015*

INTRODUCTION

Traditional and Complementary Medicine (TCM) is defined as any practice of medicine that is other than the practice of medicine or dental practices utilised by registered medical or dental practitioners (A hand book of TCM Programme in Malaysia, 2011). "Alternative" or "complementary" medicine (CAM) is used inter-changeably with traditional medicine in some countries (WHO, 2013).The TCM modalities used in Malaysia included Traditional Medicines (TM) i.e. traditional Malay medicine, traditional Chinese medicine and traditional Indian medicine as well as Complementary Medicines (CM) such as homeopathy, manipulative based practices and Islamic medical practices (Chang *et al*., 2015). Siti *et al*. (2009) pointed out that the prevalence of ever-used TCM amongst Malaysian in their lifetime was 69.4% (67.6-71.2%) and in the last 12 month period of the study was 55.6% (53.8-57.4%). In 2012, up to 34,205 TCM practitioners registered with the TCM Division, Ministry of Health Malaysia (TCM Division, 2013) inferring the importance of TCM in serving the local healthcare market.

The increasing interest in TCM usage by general public has prompted the need to understand further the prevalence and public's attitude towards the usage of TCM. Eisenberg *et al.* (1993) inferred that a substantial amount of complementary therapy was used for non-serious medical conditions, health promotion, or disease prevention rather than for life-threatening medical conditions. Many researches done were focused on using social-demographic factors to predict the users of TCM (Frass *et al*., 2012; Singh *et al*., 2004; Siti *et al*., 2009), little has been looking into the attitude of TCM users. Hence this study aims to investigate further effects of attitudes of users, i.e. perceived safeness, perceived efficacy, trust and health awareness, influence the feeling of TCM users using structural equation modelling method. This study is expected to contribute on the new perspective to both service providers and policy makers, in planning for a higher quality TCM services. The objective of this study is to investigate the effects of users' attitudes, i.e. perceived safeness, perceived efficacy, trust and health awareness, towards the feeling of TCM usage.

The next section presents a review of literature followed by a description of the methodology used. Then, this paper will proceed with presenting the

Corresponding Author: Y.L.A. Tam, Centre for the Promotion of Knowledge and Language Learning, Universiti alaysia Sabah, Jalan UMS, 88400 Kota Kinabalu, Sabah, Malaysia.
Tel: 6088-320000 ext. 5345. E-mail: adetam@ums.edu.my

data analysis and discussion of findings. The final section concludes the research implications and direction for the future research.

Literature Review:

Tam *et al*. (2014) pointed out that the true prevalence of TCM among the general populations of countries is still 'considerable uncertain' and the prevalence of the usage of TCM is likely to vary according to factors that are not fully understood. Thus further study on the factors that might drive the choice of consumers is indeed very significant.

Perceived Safeness of TCM:

Users of TCM considered modern medicines are more negative than non-users and more often try to avoid giving medicines to their child (Hämeen-Anttila *et al*., 2011). TCM was perceived as a safe form of medicine in the view of its natural content (Singh *et al*., 2004; Lindenmeyer *et al*., 2011; Hassali, *et al*. 2012). Singh *et al*. (2004) stated that the concept that TCM is a natural and safe form of medical care was quoted by 23.4% of respondents whilst 15.6% chose TCM because modern medicine carried a risk of unwanted side effects or they had actually experienced such side effects. Traditional Chinese medicine is considered to be milder, which does not have the strong side effects as conventional medicine and is also good in dealing with the side effects of taking conventional medicines by the Hong Kong respondents (Lam, 2001). Aziz and Tey (2008) pointed out further that the more someone agrees with the adequacy about safety and quality regulation of herbal medicines, the more likely a person will use herbal medicine. Menniti-Ippolito *et al*. (2002)found thatthe most common reason of using TCM was the lower toxicity of TCM and up to 70% of users affirmed to have had some benefits from the use of TCM. Besides that, less than 1% of chiropractic/osteopathic manipulation and acupuncture users reported the side effect of treatments in U.S. (Hawk *et al*., 2012). When users of TCM perceived that TCM are safe, they tend to have a better feeling of TCM usage. The followings can be hypothesized:
H1: Perceived safenessof TCM positively influences the feeling of TCM usage.

Perceived Efficacy of TCM:

The perceived efficacy of TCM by respondents was one of the reasons to apply TCM for general health improvement (Vincent and Furnham, 1996; Lam, 2001; Singh *et al*., 2004; Aziz and Tey, 2008;Mitha *et al*., 2013). Vincent and Furnham (1996) found that one of the three main pull reasons of using TCM was it is more effective than orthodox medicine. Patients thought that modern medicine has used the curative approach to diseases, whereas traditional medicine has focused on healing illnesses and applying the systems approach (Singh *et al*., 2004).Lam (2001) also pointed out that traditional Chinese medicine was considered to be good for some milder illnesses, and also better for "clearing" the disease (or "completely cure the disease").Akan *et al*. (2012) found that medical students also believed that TCM treatments, e.g. herbal treatment (79.4%), body work (including massage) (77.8%) and acupuncture (74.5%) were effective, more than 60% of them were willing to suggest the respective treatments to their patients. The results indicated that if one believed in the effectiveness of a TCM modality, they will likely to use the modality and even recommend to others. Study by Aziz and Tey (2008)revealed that respondents who agree on the general usefulness of herbal medicine in Malaysia were likely to use herbal medicine. The more someone agrees with the usefulness of TCM for various types of illnesses (e.g. diabetes, high cholesterol and arthritis), the more likely a person will use TCM (Boon, 2013; Aziz and Tey, 2008).Even with the similar beliefs about the efficacy of conventional prostate cancer treatments, TCM users believed more strongly in the efficacy of TCM for prostate cancer than non-users (Boon, 2003). Singh *et al*. (2004) found that beneficial effects were experienced by 79.2% of TCM users whilst 11.7% had no improvement in their illness; Andup to 21% of TCM users believed that there are evidence that TCM works. Hence, this study hypothesized that:
H2: Perceived efficacy of TCM positively influences the feeling of TCM usage.

Trust:

Trust concerns evaluative judgments/values formed based on relationships with the object, trust is also based on social exchanges between individuals or between an individual and an object (Siegrist *et al*., 2003). Halbert *et al*. (2006) stated that trust is being recognized as a critical aspect of medical care; Trust has been described as an expectation that medical care providers (physicians, nurses, and others) will act in ways that demonstrate that the patient's interests are a priority. Kelner and Wellman (1997) noted that over a quarter of users reported that they had chosen TCM because they believed in it and in its principles. Trust is an important determinant of adherence to treatment and screening recommendations and the length and quality of relationships with health care providers (Halbert *et al*., 2006).O'Malley *et al*. (2004) also agreed that patient trust was found to be positively correlated with willingness to seek care and adherence to treatment recommendations.Consumers' trust in a party affects their responses to it (Ha and Lee, 2011). Study done by Shabbir *et al*. (2010) showed that level of trust is associated with the high level of patient satisfaction. Thom *et al*. (2002) further concluded that patients with a low level of trust were less satisfied with the physician care immediately

after the visit and 2 weeks later and were less likely to report symptom improvement at 2 weeks. Accordingly, this study hypothesizes that:
H3: Trust of TCM positively influences the feeling of TCM usage.

Health Awareness:

Attitudes toward health in general may contribute to the decision to seek TCM treatment (McFadden, *et al*., 2010). TCM allowed users to take an active role in one's health (Lindenmeyer, *et al*., 2012; Sirois, 2008; Bishop, *et al*., 2007).TCM was being used to regain control over health by respondents who are well-being-oriented in the study done by Lindenmeyer *et al*. (2012); they regarded TCM as an area over which they themselves had control, especially as they saw midlife as a time where they could take control over their health and live.Previous researchers pointed out thatTCMusers have a greater health awareness and practice preventive health behaviors such as reducing stress, healthier food-related habits and getting proper sleep (Furnham and Kirkcaldy, 1996; Kelner& Wellman, 1997; Sirois and Gick, 2002). Sirois and Gick (2002) stressed that health aware behaviors also predicted continued TCM use,perhaps because the more experience with TCM reinforces an awareness and practice of healthy behaviors. Hence it is believed that health awareness will reinforce the positive feeling of TCM usage. Based on the preceding studies, this study hypothesizes that:
H4: Health awareness positively influences the feeling of TCM usage.

Feeling of TCM Usage:

Users pay almost all costs out of their own pocket as TCM is not covered by national insurance systems in most countries; the willingness to pay reflects the public's general acceptance of TCM therapies have benefits that outweigh their costs (Frass *et al*., 2012).Preceding research like Menniti-Ippolito*et al*. (2002) found that a high level of satisfaction was reported by users of unconventional medicine; the greatest satisfaction was shown by patients using manipulative treatments (77.6%) and users of herbal medicine (74.6%). Overall, 70% of users affirmed to have had some benefits. While in Malaysia, majority of respondents agreed that traditional products claiming aphrodisiac properties would definitely increase their sexual libido, even there is no cross reference or evidence available to support this claim (Hassali *et al*., 2012).Sirois (2002) concluded that TCM users may treat their health issues at higher rates than non-users, independent of their greater number of health problems. This treatment rate increase may be associated with greater experience with TCM.
The proposed theoretical framework is illustrated in Figure 1.

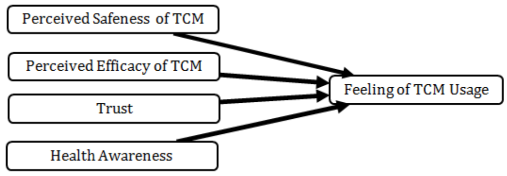

Fig. 1: Theoretical Model.

Methodology:

Quantitative research method was applied to assess the conceptual model in this study. A structured self-administered questionnaire was constructed and distributed to 500 respondents using convenience sampling technique to the public over a period of one month in Labuan and Sabah, Malaysia. 288 questionnaires were completed,yielding an effective response rate of 57.6%.

There are three sections in the questionnaire. The first section comprised of questions to gather demographic characteristics of respondents, such as respondents' gender, age, race, marital status and income level. The following section intended to ask respondents whether they have used any modality of TCM in the preceding one year before answering the questionnaire and the type of TCM used. The third section contained measurement items on the attitudes of users and feeling of using TCM. The items were measured on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). There were five items to measure Perceived safeness of TCM. Three items were adopted from Smith *et al*. (2013) and the other two items from Mitha *et al*. (2013). While the seven items to measure perceived efficacy of TCM were adopted from Sirois (2008) (two items) and Mitha *et al*. (2013) (five items) respectively.The three measurements for trust of users were adopted from Hassali *et al*. (2012), Mitha *et al*. (2013) and Sirois (2008). All the seven items for health awareness were adopted from Sirois (1998).The items used for feeling of TCM were adapted from Ghazeeri *et al*. (2012).

The data was initially analysed with Statistical Package for Social Sciences (SPSS) version 20 to generate descriptive analysis results. Structural Equation Modelling (SEM) approach via Analysis of Moment Structure (AMOS) program version 20 was then conducted to check the model consistency with the data and to estimate influences among constructs instantaneously.

Result:

Table 1 presents the Socio-demographic profile of respondents. 58% of the respondents are female. Most of them are between 31-40 years old (47.2%), married (66.7%) and received a monthly income between RM2000 and RM4000 (47.2%). A majority of them are native (77.4%) including both Muslim and non-Muslim society.

Table 1: Socio-demographic Profile of Respondents

Variable		Frequency	Percentage
Gender	Male	121	42.0
	Female	167	58.0
Age (year old)	18-30	88	30.6
	31-40	136	47.2
	41-50	59	20.5
	More than 50	5	1.7
Marital status	Single	83	28.8
	Married	192	66.7
	Other	13	4.5
Races	Native	223	77.4
	Chinese	46	16.0
	Indian	4	1.4
	Others	15	5.2
Monthly income	0-2000	71	24.7
(RM)	2001-4000	136	47.2
	4001-6000	65	22.6
	Above 6000	16	5.6

Structural Equation Modeling:

A two-step SEM approach (i.e. measurement model and structural model) was employed to confirm the reliability and validity of the measures before examining the structural relationship between constructs.

Measurement Model:

Confirmatory factor analysis was performed to test the validity of each construct in the model, including item loading, construct reliability, and average variance extracted (AVE). The results were summarized in Table 2.

Table 2: Reliability and Validity Analysis.

Constructs	Items	Loadings	Cronbach Alpha	Composite Reliability	Average Variance Extracted
Perceived Safeness	C4safe4	0.818	0.804	0.804	0.672
	C5safe5	0.822			
Perceived Efficacy	C9efficacy4	0.762	0.856	0.860	0.607
	C10efficacy5	0.778			
	C11efficacy6	0.849			
	C12efficacy7	0.721			
Trust	C16trust1	0.796	0.852	0.853	0.658
	C17trust2	0.825			
	C18trust3	0.813			
Health Awareness	C34awareness1	0.713	0.812	0.815	0.596
	C35awareness2	0.824			
	C36awareness3	0.775			
Feeling	B9Feeling	0.851	0.846	0.855	0.665
	B10Feeling	0.882			
	B11Feeling	0.702			

All standardised loadings items as presented in Table 2 is exceeded 0.50. However, three indicators from safeness factor, three indicators from efficacy factor, and five indicators from health awareness factor were removed for not meeting the requirement (i.e. measurement items had factor loadings lower than the cut-off point of 0.50). Next, the composite reliability scores for all constructs, ranging from 0.804 to 0.860, exceeded the acceptable level of 0.70 (Hair *et al*., 2010), indicating a relatively high level of constructs reliability, while the average variances extracted (AVE) of latent constructs, ranging from 0.596 to 0.672, have exceeded to the recommended threshold value of 0.50 (Hair *et al*., 2010). Hence, the current data have a good convergent validity.

Users agreed that they themselves have a higher health awareness (mean = 3.995), perceived that TCM is safe (mean = 3.510) and have a positive feeling after using TCM (mean = 3.654) (Details in table 3). Table 3 alsoshows that all the variables has a positive correlation with consumer feeling of TCM at $p<0.01$. The highest correlations appear for perceived efficacy factor (r = 0.395, $p<0.01$), followed by trust (r = 0.339, $p<0.01$), perceived safeness (r = 0.331, $p<0.01$), and health awareness (r = 0.240, $p<0.01$). The shared variances between factors were compared with the squared root of AVE for each construct to examine discriminant validity. The shared variances of the construct with other constructs were below the squared root of AVE of the individual factors, endorsing discriminant validity.

Structural Model:

The structural model was assessed by examining model fit indices and variance-explained estimates. The measure for the fit of the structural model was done through examining several goodness-of-fit indices such as the χ^2 of the model was 176.363 with 81 degrees of freedom (χ^2/df = 2.177) and Root

Mean Square Error of Approximation (RMSEA) of 0.064 (see Table 4).

Table 3: Inter-construct Correlation Coefficients.

	Perceived safeness	Perceived Efficacy	Trust	Health Awareness	Feeling
Perceived Safeness	0.820				
Perceived Efficacy	0.505**	0.779			
Trust	0.439**	0.663**	0.811		
Health Awareness	0.162**	0.175**	0.257**	0.772	
Feeling	0.331**	0.395**	0.339**	0.240**	0.815
Mean	3.510	3.226	3.348	3.995	3.654
Std Deviation	0.730	0.631	0.614	0.765	0.672

** Correlation is significant at the 0.01 level (2-tailed)

Table 4: Goodness-of-Fit Indices for Structural Model.

	χ^2	df	χ^2/df	CFI	GFI	NFI	RMSEA	PNFI	PCFI
Recommended values	N/A	N/A	< 3.0	> 0.9	> 0.9	> 0.9	< 0.08	> 0.5	> 0.5
Model values	176.363	81	2.177	0.956	0.923	0.922	0.064	0.711	0.737

Next, the fit indices value for Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Normed Fit Index (NFI), and Incremental Fit Index (IFI) were beyond 0.90 and RMSEA below 0.08, indicating a satisfactory fit. Thus, the construct validity is acceptable.

Table 5 and Figure 2 present the estimated standardised path coefficients of the structural model where all independent variables accounted for 25.4% of the total variance in customer feeling of TCM(R^2= 0.254). The influence of perceived safeness on consumer feeling of TCM was not significant (β_1 = 0.138), suggesting H1 is not supported. Next, perceived efficacy (β_2=0.313, *t*-value=2.506, p<0.05) as postulated in H2 significantly impacted consumer feeling of TCM. Thus, H2 is sustained. Indeed, efficacy was the strongest significant determinant of the consumer feeling of TCM. Further assessment of the standardised path coefficients revealed that trust (β_3=0.039, *t*-value=0.336, p>0.05) has insignificant effect with consumer feeling of TCM, deducing H3 is not accepted. Dissimilar findings appears for H4 where health awareness did appear as a significant dimension in predicting consumer feeling of TCM, as it was hypothesized in H4 (p<0.05), implying H4 is also maintained.

Discussion:

This study examined the attitudes of users, i.e. perceived safeness, perceived efficacy, trust and health awareness of users towards their feeling following practising of TCM. Empirical results revealed that only perceived efficacy and health awareness significantly influences the feeling of users. Perceived efficacy was the strongest predictor in this model, hence supporting H2. The result reflected that if the user perceived that a TCM modality is effective, then he will tend to feel much better following the TCM treatment. The perceived efficacy of users will reinforce the effectiveness of TCM even no statistical evidences that TCM really work and thus, users will continue to practice TCM in future. The results explained further the findings by previous researchers (Akan *et al*., 2012; Aziz and Tey, 2008; Boon, 2003; Singh *et al*., 2004), if the users agreed on the efficacy of TCM, they were likely to use the TCM and even recommend the use of TCM to other family members or friends.

Furthermore, the health awareness of users also significantly influenced the feeling of TCM usage, thus supporting H4. Users who have stronger health awareness tend to feel better after TCM treatment compared to those have lower health awareness. The possible explanation is the users who have stronger health awareness emphasis on the control over their own health (Lindenmeyer, *et al*., 2012; Sirois, 2008; Bishop, *et al*., 2007), so they will choose the TCM modality that they could take control of and allow them to feel better off. The result had supported work by Sirois and Gick (2002) that health awareness will reinforce the practices of TCM.

Surprisingly, perceived safeness of users did not influence the feeling of TCM usage even though users agreed on the safeness of the TCM. Therefore the empirical results did not support H1. It indicated that even though users generally perceived that TCM modalities are safer than modern medicine given its natural ingredients, however, they did not agree that TCM will necessarily contribute to better feeling of TCM. This finding is contrary to previous studies such as Menniti-Ippolito *et al*. (2002). Besides that, the trust of TCM users also did not significantly affect the feeling of TCM usage. The H3 is also not conforming to the empirical data. The users who trust the used of TCM but their belief did not affect their feeling after the used of TCM. This result also contradicts to the previous studies (Shabbir *et al*., 2010; Thom *et al*., 2002).

Conclusion And Recommendations:

The findings of this study contribute significant importance to the practical industry application and future research. The findings allowed TCM providers to understand better the feeling of users and attitudes factors (perceived efficacy and health awareness) that influenced their perceptions towards the service provided. This is particularly important when the feeling of users will actually affect the satisfaction of the users towards the TCM modalities provided.

Table 5: Relationship with Consumer Feeling of TCM.

				Estimate	S.E.	C.R.	*P*
H1	Perceived Safeness	--->	Feeling	0.138	0.090	1.579	0.114
H2	Perceived Efficacy	--->	Feeling	0.313	0.145	2.506	0.012*
H3	Trust	--->	Feeling	0.039	0.143	0.336	0.737
H4	Health Awareness	--->	Feeling	0.162	0.062	2.411	0.016*

* $p < 0.05$

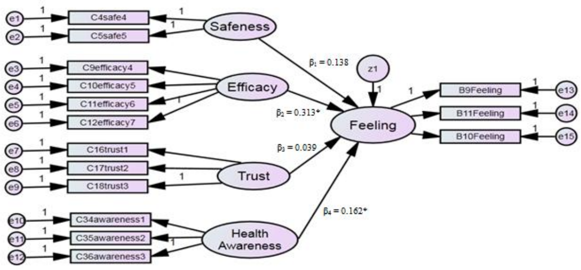

Fig. 2: Structural Model of TCM.

Consumers used TCM because they believed that TCM is safe and effective in general health improvement even though there is no evidence that TCM is safer and really works. However, service providers should recognized the need to provide a safe and effective TCM service to the users.Marketers also should not overlook the importanceof theusersattitudes, especially perceived efficacy and health awareness towards the consumers' feeling. Marketers could communicate more with their customers to improve the consumers' belief on the efficacy of TCM and thus reinforce their positive feeling after use.

Besides that, the use of structural equation modelling to examine the relationship between attitudes and feeling of users also added new understanding towards the factors that will influence the usage of TCM. Besides providing new dimensions of research in the field, this study also indicated that the attitudes of user do significantly influence the users' perspective towards the TCM service provided.

One of the limitations to be pointed out here is the samples were collected from Sabah and Labuan, Malaysia, which might not truly represent the general public in Malaysia. Future research may increase the scope of data collection to include samples from different states in Malaysia. Besides that, the attitudes examined in this study also limited to perceived safeness, perceived efficacy, trust and health awareness of users, future study can explore more attitude dimensions and the relationship between the usage of TCM. Furthermore, respondents were asked to recall the use of TCM in the past one year, which may encounter recall bias. New research may need to reduce the time frame of recall in order to reduce this bias.

ACKNOWLEDGEMENTS

The authors would like to acknowledge the Universiti Malaysia Sabah, Malaysia for the research grant SLB0066-SS-2013 to conduct this research.

REFERENCES

Adams, J., D. Sibbritt, A. Broom, D. Loxton, M. Pirotta, J. Humphreys and C.W. Lui, 2011. A Comparison of complementary and alternative medicine users and use across geographical areas: A national survey of 1,427 women BMC Complementary & Alternative Medicine, 11: 85.

Akan, H., G. Izbirak, E.C. Kaspar, C.A. Kaya, S. Aydin, N. Demircan, P.G. Bucaktepe C. Özer, H.A. Sahin and O. Hayran, 2012. Knowledge and attitudes towards complementary and alternative medicine among medical students in Turkey. BMC Complementary & Alternative Medicine, 12:115.

Ambrose, E.T. and S. Samuels, 2004.Perception and use of herbals among students and their practitioners in a university setting. Journal of the American Academy of Nurse Practitioners, 16(4): 166-173.

Astin, J.A., 1998. Why patients use alternative medicine: Results of a national study. Complementary Therapies in Medicine, 7(1): 1548-1553.

Aydin, S., A.O. Bozkaya, M. Mazicioglu, A. Gemalmaz, A. Ozcakir and A. Ozturk, 2008. What influences herbal medicine Use?Prevalence and related factors. Turkish Journal of Medical Sciences, 38(5): 455-463.

Aziz, Z. and N.P. Tey, 2009. Herbal medicines: Prevalence and predictors of use among Malaysian adults. Complementary Therapies in Medicine, 17: 44-50.

Bishop, F.L., L. Yardley and G.T. Lewith, 2007. A systematic review of beliefs involved in the use of complementary and alternative medicine. Journal of Health Psychology, 12(6): 851-867.

Boon, H., K. Westlake, M. Stewart, R. Gray, N. Fleshner and A. Gavin, 2003. Use of complementary/alternative medicine by men diagnosed with prostate cancer: prevalence and characteristics.Urology, 62(5): 849–853.

Braun, L.A., E. Tiralongo, J.M. Wilkinson, O. Spitzer, M. Bailey, S. Poole and M. Dooley, 2010. Perceptions, use and attitudes of pharmacy customers on complementary medicines and pharmacy practice.BMC Complementary & Alternative Medicine, 10: 38.

Broom, A., K. Wijewardena, D. Sibbritt, J. Adams and K.R. Nayar, 2010. The use of traditional, complementary and alternative medicine in Sri Lankan cancer care: Results from a survey of 500 cancer patients. Public Health, 124: 232-237.

Chang, M.L.D., Y.L.A. Tam and M.S. Norazah, 2015.The prevalence of traditional and complementary medicine usage in Sabah, Malaysia. 6th International Conference on Business and Economics Research (ICBER) proceeding.

Eguchi, K., I. Hyodo and H. Saeki, 2000. Current status of cancer patients' perception of alternative medicine in Japan: A preliminary cross-sectional survey. Support Care Cancer, 8: 28-32.

Eisenberg, D.M., R.C. Kessler, C. Foster, F.E. Norlock, D.R. Calkins and T.L. Delbanco, 1993. Unconventional medicine in the United States: Prevalence, costs, and patterns of use. The New England Journal of Medicine, 328(4): 246-252.

Ernst, E., 2000. Prevalence of use of complementary/alternative medicine: A systematic review, 78(2): 252-257.

Frass, M., R.P. Strassl, H. Friehs, M. Müllner, M. Kundi and A.D. Kaye, 2012. Use and acceptance of complementary and alternative medicine among the general population and medical personnel: A systematic review. The Ochsner Journal, 12(1): 45-56.

Furnham, A. and B. Kirkcaldy, 1996. The health beliefs and behaviours of orthodox and complementary medicine clients. British Journal of Clinical Psychology, 35(1): 49-61.

Ghazeeri, G.S., J.T. Awwad, M. Alameddine, Z.M.H. Younes and F. Naja, 2012.Prevalance and determinanats of complementary and alternative medicine use among infertile patients in Lebanon: A cross sectional study. BMC Complementary and Alternative Medicine, 12:129.

Ha, S. and Y.J. Lee, 2011. Determinants of consumer-driven healthcare: Self-confidence in information search, health literacy, and trust in information sources.International Journal of Pharmaceutical and Healthcare Marketing, 5(1): 8-24.

Hair, J.F., B. Black, B. Babin, R.E. Anderson and R.L. Tatham, 2010. Multivariate Data Analysis: A Global Perspective. Pearson Education Inc., NJ.

Halbert, C.H., K. Armstrong, O.H. Gandy, Jr. and L. Shaker, 2006.Racialdifferences in trust in health care providers. Archives of Internal Medicine, 166(8): 896-901.

Hassali, M.A., F. Saleem, A.A. Shafie, H.K. Al-Qazaz, M. Farooqui, H. Aljadhey, M. Atif and I. Masood, 2012. Assessment of general public perceptions toward traditional medicines used for aphrodisiac purpose in state of Penang, Malaysia. Complementary Therapies in Clinical Practice, 18: 257-260.

Hawk, C., H. Ndetan and M.W. Evans, Jr., 2012. Potential role of complementary and alternative health care providers in chronic disease prevention and health promotion: An analysis of National Health Interview Survey data.Preventive Medicine, 54: 18-22.

Hämeen-Anttila, K.P., U.R. Niskala, S.M. Siponen and R.S. Ahonen, 2011.The use of complementary and alternative medicine products in preceding two days among Finnish parents – a population survey.BMC Complementary & Alternative Medicine, 11:107.

Kelner, M. and B. Wellman, 1997. Health care and consumer choice: Medical and alternative therapies. Social Science & Medicine, 45(2): 203-212.

Lam, T.P., 2001. Strengths and weaknesses of traditional Chinese medicine and Western medicine in the eyes of some Hong Kong Chinese. J Epidemiol Community Health, 55: 762-765.

Lindenmeyer, A., K. Jamie, F. Griffiths and F. Légaré, 2011. "They're made in factories and not by witches on the allotment": A qualitative study of midlife women in the United Kingdom, exploring their approaches to complementary and alternative medicines. Health Care for Women International, 32: 1046-1067.

Maclennan, A.H, D.H. Wilson and A.W. Taylor, 1996.Prevalence and cost of alternative medicine in Australia.The Lancet, 347(9001): 569-573.

Maskarinec, G., C.C. Gotay, Y. Tatsumura, D.M. Shumay and H. Kakai, 2001. Perceived cancer causes: Use of complementary and alternative therapy. Cancer Practice, 9: 183–190.

McFadden, K.L., T.D. Hernández and T.A. Ito, 2010. Attitudes toward complementary and alternative medicine influence its use. Explore, 6(6): 380-388.

Menniti-Ippolito F., L. Gargiulo, E. Bologna, E. Forcella and R. Raschetti, 2002. Use of unconventional medicine in Italy: A nation-wide survey. European Journal of Clinical Pharmacology, 58(1): 61-64.

Mitha, S., Nagarajan, V., M.G. Babar, M.J.A. Siddiqui and S.Q. Jamshed, 2013. Reasons of using complementary and alternative medicines (CAM) among elderly Malaysians of Kuala Lumpur and Selangor states: An exploratory study. Journal of Young Pharmacists, 5: 50-53.

O'Malley, A.S., V.B. Sheppard, M. Schwartz and J. Mandelblatt, 2004.The role of trust in use of preventive services among low-income African-American women. PreventiveMedicine, 38(6): 777-785.

Shabbir, S., H.R. Kaufmann and M. Shehzad, 2010. Service quality, word of mouth and trust: Drivers to achieve patient satisfaction. Scientific Research and Essays, 5(17): 2457-2462.

Shahid, V., M. Muneer and Shazia, 2013. Reasons of using complementary and alternative medicines (CAM) among elderly Malaysians of Kuala Lumpur and Selangor states: An exploratory study. Journal of Young Pharmacists, 5: 50-53.

Siegrist, M., T.C. Earle, H. Gutscher, 2003. Test of a trust and confidence model in the applied context, of electromagnetic field (EMF) risks. Risk Analysis, 23(4): 705-716.

Selnes, F., 1998. Antecedents and consequences of trust and satisfaction in buyer-seller relationships. European Journal of Marketing, 32(3/4): 305-322.

Siti, Z.M., A. Tahir, A. Ida Farah, S.M. Ami Fazlin, S. Sondi, A.H. Azman, A.H. Maimunah, M.A. Haniza, M.D. SitiHaslinda, A.K. Zulkarnain, I. Zakiah and W.C. Wan Zaleha, 2009. Use of traditional and complementary medicine in Malaysia: A baseline study. Complementary Therapies in Medicine, 17: 292-299.

Singh, V., D.M. Raidoo and C.S. Harries, 2004. The prevalence, patterns of usage and people's attitude towards complementary and alternative medicine (CAM) among the Indian community in Chatsworth, South Africa.BMC Complementary & Alternative Medicine, 4-3.

Sirois, F.M., 1998. An Investigation of the health beliefs and motivations of complementary medicine clients, Master Thesis.

Sirois, F.M., 2002.Treatment seeking and experience withcomplementary/alternative Medicine: A continuum of choice. The Journal of Alternative and Complementary Medicine, 8(2): 127-134.

Sirois, F.M. and M.L. Gick, 2002.An investigation of the health beliefs and motivations of complementary medicine clients. Social Science & Medicine, 55: 1025-1037.

Sirois, F.M., 2008. Motivations forconsulting complementary and alternative medicine practitioners: A comparison of consumers from 1997-8 and 2005.BMC Complementary & Alternative Medicine, 8:16.

Smith, C.A., D.J. Bateson and E. Weisberg, 2013. A survey describing the use of complementary therapies and medicines by women attending a family planning clinic. BMC Complementary & Alternative Medicine, 13-224.

Tam, Y.L.A., M.L.D. Chang and M.S. Norazah, 2014. Understanding consumption of the traditional and complementary medicine : a conceptual model. International Journal of Research in Management and Social Science, 2(3): 1-6.

Thom, D.H., R.L. Kravitz, R.A. Bell, E. Krupat and R. Azari, 2002. Patient trust in the physician: Relationship to patient requests. Family Practice, 19(5): 476-483.

Trangmar, P. and V.A. Diaz, 2008.Investigating complementary and alternative medicine use in a Spanish-speaking Hispanic community in South Carolina. Annals of Family Medicine, 6(1): 512-515.

Vincent C. and A. Furnham, 1996. Why do patients turn to complementary medicine? An empirical study. The British Journal of Clinical Psychology, 35(1): 37-48.

…, 2013.WHO Traditional Medicine strategies 2014-2023, World Health Organisation.

…, 2007. Dasar Perubatan Tradisional dan Komplementari Kebangsaan, semakan ke-2, Bahagian Perubatan Tradisionaldan Komplementari Kebangsaan, Kementerian Kesihatan Malaysia.

…, 2013. Laporan Tahunan, 2012. Bahagian Perubatan Tradisionaldan Komplementari Kebangsaan, Kementerian Kesihatan Malaysia.

.., .2011. A Handbook of Traditional and Complementary Medicine Programme in Malaysia, Traditional and Complementary Medicine Division, Ministry of Health Malaysia.