ORIGINAL ARTICLE

THE GAP BETWEEN KNOWLEDGE AND PERCEPTION ON EDUCATION IN TRADITIONAL AND COMPLEMENTARY MEDICINE AMONG MEDICAL STAFF IN MALAYSIA

Maihebureti Abuduli[1,2,3] Zaleha Md Isa[2], Syed Mohamed Aljunid[1]

[1] United Nations University-International Institute for Global Health, Malaysia
[2] Faculty of Community Health, University Kebangsaan Malaysia
[3] Xinjiang Uyghur Medical College, Xinjiang, China

ABSTRACT

Although the Ministry of Health Malaysia has been encouraging the practice of Traditional and Complementary Medicine (T&CM)[1, 2, 3, 4] but patients/clients has not been able to apply it for their need of medical treatments and sometimes it leads to negative outcomes due to lack of knowledge on T&CM and its safe applications[5,6,7,8] Most of the western-trained physicians are ignorant of risk and benefits of T&CM[9,10,11]. This study was aimed to determine the gap between knowledge regarding T&CM and perception on education in T&CM among the medical staffs in five selected hospitals in Malaysia. A cross-sectional survey was done at five public hospitals among medical staff in Malaysia by using quantitative methods. A total of 477 medical staffs were involved in this study. The study showed that the overall knowledge of T&CM among the medical staffs were poor (61.2%). Having good knowledge regarding T&CM were significantly higher in Hospital Duchess of Kent (52%, p=0.001), among the non-Malays (44%, p=0.047) and pharmacists (47.2%, p=0.030). Positive perception on health education in T&CM among medical staffs were high (85.3%) especially among females (88.1%, p=0.002) and pharmacists (93.7%, p<0.001). The use of T&CM among the general population is relatively high in Malaysia and many patients increasingly seek the information on T&CM therapies from medical staffs. Knowledge regarding T&CM was poor in this study because most of the medical staffs have not been exposed to T&CM education. This interesting scenario between poor knowledge and high positive perception on health education in T&CM shows the demand of urgent intervention in educating the medical staffs. We recommend that medical staffs must have some basic education and knowledge about T&CM before they could offer advice to their patients. Doctors are of the utmost important in this regard because they play a very important role in patient care. Providing T&CM education to medical staff may help to integrate T&CM into the mainstream medicine.

Keywords: *Traditional and Complementary Medicine, knowledge, perception on education, Malaysia.*

INTRODUCTION

Traditional and Complementary Medicine has been gaining acknowledgement and acceptance all over the world. [12, .13,14,15] Also the demand for its services is increasing[16].It has been increasingly popular in its worldwide application including Malaysia[17] From the year 2000 to 2005, annual sales for traditional medicines increased from USD 385 million (RM 1 billion) to USD 1.29 billion (RM 4.5 billion) [14,16].

A large numbers of the population in the developing countries still rely on traditional practitioners [18,19,20] and local medicinal plants to satisfy their primary healthcare needs[21,22] (in some Asian and African countries, 80% of the population depending on traditional medicine for primary health care) [17, 23], and the high cost of healthcare insurance, population ageing and other related reasons in the developed countries has propelled the public to seek some form of T&CM treatment for their healthcare need[24, 25]. This study was aimed to determine knowledge regarding T&CM and perception on education in T&CM among the medical staffs in five selected hospitals in Malaysia.
Year of working was 11 years. The monthly personal income of participants ranged from RM 2,000 to RM 13,000. The median income was RM

METHODS

Knowledge and perception on education in T&CM were measured using questionnaire. A total scoring of 20 points were done for knowledge, scores from 0 to 12 were considered as "poor knowledge" and scores from 13 to 20 were considered as "good knowledge". While, a total scoring of 5 points were done for perception on education, scores from 0 to 3 were considered as "negative perception" and scores from 4 to 5 were considered as "positive perception".

The associations between socio-demographic characteristics of respondents, knowledge regarding T&CM and perception on education in T&CM were analyzed using the Chi–Squared test (x^2). The statistical test was considered significant when p-value was less than 0.05.

RESULTS

The mean age of participants was 37.4 years old (SD 7.94), the minimum age was 24 years old and the maximum age was 56 years old. The minimum and maximum years of working were 2 years and 32 years, respectively. The median 5,140. Table 1 shows the summary of the socio-demographic characteristics of the respondents.

Table 1: Socio-demographic characteristics of medical staffs

Characteristics	N = 477	Percentage (%)
Name of hospitals		
UKMMC	94	19.7
HPJ	90	18.9
HSNZ	96	20.1
HDOK	98	20.5
SGH	99	20.8
Age category (year)		
24-29	83	17.4
30-39	211	44.2
40-49	141	29.6
50 and above	42	8.8
Gender		
Male	108	22.6
Female	369	77.4
Ethnicity		
Malay	277	58.1
Chinese	117	24.5
Indian	11	2.3
Others	72	15.1
Religion		
Islam	302	63.3
Christianity	104	21.8
Buddhism	55	11.5
Hinduism	7	1.5
Others	9	1.9
Career		
Doctor	166	34.8
Pharmacist	142	29.8
Nurse	169	35.4
Years of working		
≤10	215	45.1
>10	262	54.9
Marital Status		
Married	308	64.6
Single	157	32.9
Separated /Divorced/ Widowed	12	2.5
Education level		
Diploma	147	30.8
Degree	236	49.5
Master/PhD	94	19.7
Income category (RM) (individual)		
Low (≤4000)	253	53.0
High(>4000)	224	47.0

Note: UKMMC=University Kebangsaan Malaysia Medical Center, HPJ=Hospital Putra Jaya, HSNZ=Hospital Sultanah Nur Zahirah, HDOK=Hospital Duchess of Kent, SGH= Sarawak General Hospital.

Knowledge of medical staffs about T&CM in which a total of 85.1% believed that massage could help in maintaining physical, mental, and emotional well-being, 76.9% believed that T&CM usage was mostly to avoid the side effects of synthetic products, while only 9.0% knew that prickly pear cactus (nopal) was useful for the treatment of diabetes.

Table 2 indicates the perception on health education in T&CM. About 89.1% of the respondents agreed that educational materials about T&CM should be made available at their libraries and bookstores. It was also shown that a total of 83.4% of the respondents agreed that T&CM practitioners have to learn conventional medicine and that the perception about health education in T&CM was highly positive among the medical staffs.

Table 2: Perception on health education in Traditional and Complementary Medicine (N=477)

	Agree N (%)	Unsure N (%)	Disagree N (%)
Educational materials about T&CM should be made available at our library and bookstores.	425 (89.1)	41 (8.6)	11 (2.3)
T&CM practitioners have to learn conventional medicine.	398 (83.4)	63 (13.2)	16 (3.4)
Fundamental knowledge about T&CM should be incorporated into medical curriculum.	383 (80.3)	68 (14.2)	26 (5.5)
Health education and training in T&CM is important for medical staff.	382 (80.1)	80 (16.8)	15 (3.1)
There should be T&CM advisers or T&CM departments in all hospitals.	376 (78.8)	73 (15.3)	28 (5.9)

Table 3: Relationship between knowledge on T&CM and socio-demographic factors among the medical staffs

Knowledge	Good (185) (38.8%) N (%)	Poor (292) (61.2%) N (%)	N=477	X^2	p-value
Hospitals				18.971	0.001**
UKMMC	24 (25.5)	70 (74.5)	94		
HPJ	43 (47.8)	47 (52.2)	90		
HSNZ	34 (35.4)	62 (64.6)	96		
HDOK	51 (52.0)	47 (48.0)	98		
SGH	33 (33.3)	66 (66.7)	99		
Age (year)				1.356	0.244
<40	108 (36.7)	186 (63.3)	294		
≥40	77 (42.1)	106 (57.9)	183		
Sex				0.040	0.842
Male	41 (38.0)	67 (62.0)	108		
Female	144 (39.0)	225 (61.0)	369		
Ethnicity				3.947	0.047*
Malays	97 (35.0)	180 (65.0)	277		
Non Malays	88 (44.0)	112 (56.0)	200		
Religion				1.428	0.232
Islam	111 (36.8)	191 (63.2)	302		
Non Islam	74 (42.3)	101 (57.7)	175		
Career				7.013	0.030*
Doctors	54 (32.5)	112 (67.5)	166		
Pharmacists	67 (47.2)	75 (52.8)	142		
Nurses	64 (37.9)	105 (62.1)	169		
Years of working				0.005	0.942
≤10	83 (38.6)	132 (61.4)	215		
>10	102 (38.9)	160 (61.1)	262		
Marital Status				1.653	0.198
Married	126 (40.9)	182 (59.1)	308		
Not married	59 (34.9)	110 (65.1)	169		
Education				1.799	0.407
Diploma	59 (40.1)	88 (59.9)	147		
Degree	85 (36.0)	151 (64.0)	236		
Master/PhD	41 (43.6)	53 (56.4)	94		
Income(RM)				0.001	0.981
Low(<4000)	98 (38.7)	155 (61.3)	253		
High(≥4000)	87 (38.8)	137 (61.2)	224		

Although the knowledge on T&CM among the medical staffs were poor (61.2%) but there were high positive perception on education in T&CM among them (85.3%).

Table 3 shows the association between knowledge on T&CM and socio-demographic characteristic of the respondents. The finding shows that knowledge regarding T&CM was

significantly higher in Hospital Duchess of Kent (52%, p=0.001), among non-Malays (44%, p=0.047), and pharmacists (47.2%, p=0.03). There were no significant differences in the knowledge regarding T&CM among the medical staffs between age, gender, religion, working experience, marital status, education level and income.

Table 4 shows the association between perception on education in T&CM and socio-demographic characteristics of the respondents. The finding shows that positive perception regarding education in T&CM among medical staffs were higher among females (88.1%, p=0.002) and pharmacists (93.7%, p<0.001). There were no significant different in the perception regarding health education T&CM between hospitals, age, ethnicity, religion, years of working, marital status, education level and income.

Table 4: Relationship between perception on education in T&CM and socio-demographic factors among the medical staffs

Perception	Positive (407) (85.0%) N (%)	Negative (70) (15.0%) N (%)	N=477	X^2	p-value
Hospitals				3.262	0.515
UKMMC	77 (81.9)	17 (18.1)	94		
HPJ	77 (85.6)	13 (14.4)	90		
HSNZ	87 (90.6)	9 (9.4)	96		
HDOK	82 (83.7)	16 (16.3)	98		
SGH	84 (84.8)	15 (15.2)	99		
Age (year)				0.244	0.622
<40	249 (84.7)	45 (15.3)	294		
≥40	158 (86.3)	25 (13.7)	183		
Sex				9.85	0.002**
Male	82 (75.9)	26 (24.1)	108		
Female	325 (88.1)	44 (11.9)	369		
Ethnicity				0.483	0.487
Malays	239 (86.3)	38 (13.7)	277		
No- Malays	168 (84.0)	32 (16.0)	200		
Religion				2.039	0.153
Islam	263 (87.1)	39 (12.9)	302		
Non Islam	144 (82.3)	31 (17.7)	175		
Career				16.986	<0.001***
Doctors	128 (77.1)	38 (22.9)	166		
Pharmacists	133 (93.7)	9 (6.3)	142		
Nurses	146 (86.4)	23 (13.6)	169		
Years of working				0.014	0.907
≤10	183 (85.1)	32 (14.9)	215		
>10	224 (85.5)	38 (14.5)	262		
Marital Status				0.237	0.626
Married	261 (84.7)	47 (15.3)	308		
Not married	146 (86.4)	23 (13.6)	169		
Education Level				2.209	0.331
Diploma	129 (87.8)	18 (12.2)	147		
Degree	202 (85.6)	34 (14.4)	236		
Master/PhD	76 (80.9)	18 (19.1)	94		
Income (RM)				2.524	0.112
Low (<4000)	222 (87.7)	31 (12.3)	253		
High(≥4000)	185 (82.6)	39 (17.4)	224		

***significant at p<0.01, ***significant at p<0.001*

CONCLUSION AND RECOMMENDATIONS

Knowledge on T&CM among medical staffs were poor in this study because most of the medical staffs have never attended any T&CM classes/courses or workshops/conferences in their life. It turned out that many have not been exposed to T&CM education, however most of the medical staffs have positive perception about health education/training in T&CM. They believed in the importance of education and training in T&CM for medical staffs and agreed

that it should be incorporated into the medical curriculum.

Malaysia therefore needs to have a traditional medical education system since T&CM has not been included in the curriculum of medical schools at the moment. Given the ultimate goal of healthcare is to improve patients' health, an increase in the medical staff's knowledge regarding T&CM may help to rapidly integrate T&CM into the mainstream (western) medicine.

Medical staffs are aware of the importance of the subjects and wanted to learn more about T&CM and improve their knowledge. It would be reasonable to provide training opportunities for medical staff, primarily for the types of T&CM demanded by the population and recommended by the doctors. Many medical staffs do not know whether they should use T&CM or not. Some of them tend to care about their patients using T&CM the same way as they would perceive the risk of consuming alcohol or cigarettes.

In this study, many medical staffs requested for educational materials about T&CM to be made available at their library and also they are willing to provide future training in T&CM for medical students. An integration of T&CM in undergraduate studies is beneficial for future medical staffs to have some basic knowledge about T&CM. It is very beneficial for the medical staff's personal improvement in knowledge regarding T&CM. Doctors are of the utmost important in this regard because they play a very important role in patient care. Providing T&CM education to medical staffs may help to integrate T&CM into the mainstream medicine.

ACKNOWLEDGEMENTS

The authors wish to acknowledge the support obtained from the Faculty's Research Committee of Universiti Kebangsaan Malaysia Medical Centre with the approval code FF-369-2011. National Institutes of Health approval code NMRR-11-857-10102. We would also like to thank Ministry of Health, Ministry of Higher Education for granting us.

REFERENCE

1. WHO. Legal status of traditional medicine and complementary/alternative medicine: a worldwide review. Essential medicines and health products information portal, World Health Organization. 2001.

2. Traditional and Complementary Medicine Division, Ministry of Health Malaysia. A handbook of traditional and complementary medicine programme in Malaysia, international collaboration in traditional & complementary medicine (page 10). Traditional & Complementary Medicine Division Oct 2011.

3. Lai, LT. A mix of old and new (page 239). Regulation and expansion (page 240). The report Malaysia 2010, Oxford Business Group. 2010.

4. Traditional and Complementary Medicine, MOH. Malaysia national traditional and complementary medicine policy. Available from: www.tcm.moh.gov.my

5. Complementary and alternative treatments, Irish cancer society. Available from: www.cancer.ie/cancer-information/treatments/alternative.

6. Herbal medicine. Cancer Research UK. Available from: www.cancerresearchuk.org.

7. Cassileth BR & Deng G. Complementary and alternative therapy for cancer. *The Oncologist* . 2004; 9:80-89.

8. Chaw Sh Ch & Pong AP. Scientific issue in botanical drug product development. *SciMedCentral. Ann Biom Biostat.2015;* 2(1): 1012

9. Clement YN. A gap between acceptance and knowledge of herbal remedies by physicians: The need for educational intervention, *BMC Complementary and Alternative Medicine. BioMedCentral,* 2005; 5:20.

10. College of Physicians and Surgeons of British Columbia. Professional standards and guidelines-complementary and alternative therapies. 2009. Available from: http://www.cpsbc.ca/PSG-Complementary-a.

11. Maha N & Show A. Academic Doctors view of complementary and alternative medicine (CAM) and it is role within the NSH: an exploratory qualitative study. *BMC complementary and alternative medicine 2007*; 7:17.

12. Chaudhury RR & Rafei UM. Traditional Medicine in Asia. World Health Organization Regional Office for South-East Asia New Delhi. *SEARO Regional Publications*. 2001; 39.

13. Eisenberg DM, Davis RB, Ettner SL, Appel S, WilkeyS, Van Rompay M, Kessler RC. Trends in alternative medicine use in the United States, 1990-1997: results of a follow-up national survey. *JAMA* 1998; 280:1569-75.

14. Aziz Z. & Tey NP. Herbal medicines:

Prevalence and predictors of use among Malaysian adults. Complementary therapies in medicine. *Complement Ther Med*. 2009;17 (1): 44-50.

15. Abuduli M, Ezat Sh. Aljunid S. Role of traditional and complementary medicine in universal coverage. *Malaysian Journal of Public Health Medicine MJPHM* 2011; 11 (2): 1-5.

16. Lai D, Chappell N. Use of traditional Chinese medicine by older Chinese immigrants in Canada.*FamPract* 2007; 24: 56–64. doi: 10.1093/fampra/cml058.

17. WHO. Traditional medicine. World Health Organization. 2008. Available from:

http://www.who.int/mediacentre/factsheets/fs134/en/.

18. WHO. Regulatory situation of herbal medicines a worldwide review. Available from: www.who.int/medicinedocs/.../whozip57e.pdf.

19. History of use of traditional herbal medicines. *Iarc Monographs Volume 82*. Available from: monographs.iarc.fr/ENG/…/mono82-6A.pdf assessed on Jan 2015.

20. Payyappallimana U. Role of traditional medicine in primary health care: An overview of perspectives and challenges. *Yokohama Journal of Social Sciences*. 2009; 14 (6).

21. Essentials of clinical specialists in Chinese medicine. Essentials of Chinese medicine Vol: 3. (Page 7). Springer-Verlag London Limited 2010.

22. Packiaraj P. Suresh K. KumarSS. Sundaram SS. Pounraj P. Traditional Knowledge of Medicinal plants used by rural peoples of nilakottai taluk,dindigul district, TN, India, *Bioscientia Botanica*. 2014. 1 (1).

23. Nworu CS, Vin-Anuonye T, Okonkwo ET, Oyeka CO, Okoli UB, Onyeto CA, Mbaoji FN, Nwabunike I , Akah PA. Unregulated promotion and sale of herbal remedies: a safety and efficacy evaluation of twelve such commercial products claimed to be beneficial and patronised for a variety of ailments in Nigeria. *Nworu et al., J Pharmacovigilance 2014, S1*.

24. Pagán JA, Pauly MV. Access to conventional medical care and the use of complementary and alternative medicine. At the intersection of health, healthcare and policy health affairs. *Health Aff* doi: 10.1377/hlthaff.24.1.255 2005;24(1) 255-262.

25. Yen L, Jowsey T, McRae IS. Consultations with complementary and alternative medicine practitioners by older Australians: results from a national survey. *BMC Complementary and Alternative Medicine*. 2013;13:73.