

Perception and Use of Herbal Medicine by Medical Doctors

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Abstract

Since 1995, the Government has encouraged people to establish Centre of Development and Implementation of Traditional Medicine or *Sentra Pengembangan dan Penerapan Pengobatan Tradisional (SP3T)* through the Ministry of Health's decree No. 0584/Menkes/SK/VI/1995. At the moment several centers have been realized and provided herbal medicine (HM) in their service. The aim of the survey was to get the picture of the perception and the usage of HM by medical doctors. Questionnaires were distributed by online system to 267 doctors. The results showed that 53% respondents were 41-55 years old, whereas 47% were 40 or younger, more than half (59%) were female. With regards to their medical specializations 29% were GPs, 18%, internists, 6% neurologists and obstetricians, and 41% other specializations. Sixty five percent respondents did not prescribe HM but 35% prescribed occasionally. Those who are not practicing or prescribing HM to their patients stated that they never learnt it (41%), were doubtful to its efficacy (41%), knew nothing about HM (29%), and were concern about the quality (18%). Although HM is relatively cheaper than modern medicine (59%), but 82% respondents stated that information on HM is lacking. They proposed that awareness about HM should be increased through seminars (88%), courses/workshops (53%), journal publication (63%), brochures and leaflets (24%), and medical *representative* (18%). The use of HM by respondents is mainly for non-specific diarrhea (63%), hypertension and rheumatoid arthritis (38%), hypercholesterolemia (25%) and diabetes mellitus (13%). Respondents agreed that HM should be taught in medical schools (94%) for at least one semester (60%) or two semesters (40%).

Keywords: phytopharmaca, medical education, perception, herbal medicine

Persepsi dan Penggunaan Obat Herba oleh Dokter

Abstrak

Sesuai dengan Keputusan Menteri Kesehatan No. 0584/Menkes/SK/VI/1995, sejak 1995 Pemerintah telah menganjurkan masyarakat untuk membentuk Sentra Pengembangan dan Penerapan Pengobatan Tradisional (SP3T). Saat ini sudah ada beberapa pusat pelayanan pengobatan herba. Tujuan survei ini untuk mendapatkan gambaran tentang persepsi dan penggunaan obat herba (OH) oleh para dokter. Kuesioner disebarikan secara daring kepada 267 alumni dan non-alumni Fakultas Kedokteran UKI. Hasilnya memperlihatkan 53% responden berusia 41-55 tahun, 47% berusia sampai 40 tahun, serta 59% terdiri atas perempuan. Dari segi spesialisasi didapatkan 29% dokter umum, 18% spesialis penyakit dalam, 6% spesialis penyakit syaraf dan ahli kandungan sedangkan 41% memiliki spesialisasi lain. Enam puluh lima persen responden tidak meresepkan OH dan hanya 35% responden yang meresepkan secara tidak rutin. Hal itu karena mereka tidak pernah belajar OH (41%), tidak yakin akan efikasinya (41%), tidak tahu sama sekali tentang OH (29%) dan tidak yakin akan mutunya (18%). Meskipun OH relatif lebih murah daripada obat konvensional (59%) tapi 82% responden menyatakan informasi tentang OH sangat kurang. Mereka mengusulkan agar informasi OH ditingkatkan melalui seminar (88%), kursus/lokakarya (53%), publikasi lewat jurnal (63%), brosur dan liflet (24%) dan *medical representative* (18%). Penggunaan OH oleh responden terutama untuk diare non-spesifik (63%), hipertensi dan artritis reumatoid (38%), hiperkolesterolemia (25%) dan diabetes mellitus (13%). Responden setuju agar OH diajarkan di fakultas kedokteran (94%) sekurang-kurangnya satu semester (60%) atau dua semester (40%).

Kata kunci: fitofarmaka, pendidikan kedokteran, persepsi, obat herba

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Introduction

The use of herbal medicine (HM) is globally expanding. Once known as a product of local knowledge and use locally by indigenous people, the usage of HM becomes world-wide.¹ Up to now medical practice and public health services in countries, such as Germany, China, East Asia, India, Far East and South East Asia, countries, are also offering alternative or herbal medicine to their patients.²⁻⁴ As a consequence, the need of evidence on efficacy and safety is certainly high as is directed by the World Health Organization (WHO) guidelines on herbal medicine.⁵ ⁶ Although the use and acceptance of HM by patients and public have been increasing, there is a great portion of medical doctors who refuse to use or ignore the usage of HM. A survey in Queensland, Australia, found that general practitioners (GPs) lack knowledge and require information on complementary medicine, although most of them use complementary medicine, including HM for their patients either by self-medication or in-addition to their concurrent use of conventional medicine.⁷

Jamu, a specific name for Indonesia's HM and like any other HMs, has its own tradition and used within certain cultures in Indonesia. The Ministry of Health's decree, released in 1995, encouraged every particular health center in Indonesia to establish the Centre of Development and Implementation of Traditional Medicine or *Sentra Pengembangan dan Penerapan Pengobatan Tradisional* (SP3T).⁸ In order to enhance clinical research on HM, and to increase the "body of knowledge" on HM, in 2010, again the Ministry of Health initiated clinical-based research on *jamu* through Permenkes No. 003/Menkes/Per/I/2010.⁹ The first center "Hortus Medicus", was

established in Tawangmangu, Central Java, which formerly known as the center for cultivating medicinal plants. Under this decree, however, the center receives patients and offers them herbal medicine. In the center, every case has been carefully recorded as a pre- and post-intervention treatment. This initiative will hopefully establish a strong and large clinical evidence of the efficacy of *jamu* for certain ailments.

To date, there is no published study on perception and usage of HM by the Indonesian medical doctors. We only found one study that revealed the perception and knowledge of risk of *jamu* among the urban consumers.¹⁰ Therefore, the aim of the study was to evaluate the perception and usage of HM by medical doctors in Indonesia.

Method

An online questionnaire was developed and distributed to 267 medical doctors graduated from the medical school of Universitas Kristen Indonesia (UKI). There were 17 items in the questionnaire comprised of demographic characteristics, perceptions and usage pattern of herbal medicine by the respondents. The responses were automatically tallied and summarized by the online system of the computer that equipped with Google's database software. The collected data are descriptively presented.

Results

The response rate of the survey was 72% (192/267), which comprised of 111 (58%) male and 81 (42%) female. The general demographic of respondents is presented in Table 1.

Table 1. Characteristics of Respondents and the Pattern of HM Usage

Characteristics			Use of herbal medicine					
			Never		Sometimes		Often	
Age (years)	n (%)	n	%	n	%	n	%	
<30	33 (17)	10	5.2	21	10.9	2	1	
31-40	48 (25)	15	7.8	29	15.1	4	2	
41-55	103 (54)	80	41.6	22	11.4	1	0.5	
>55	8 (4)	6	3.1	1	0.5	1	0.5	
	192 (100)	111	57.7	73	37.9	8	4	
Medical specialization	General practitioner	55 (29)	45	23.4	8	4.1	2	1
	Internist	48 (25)	44	23.4	4	2	0	0
	Obstetric-gynecologist	8 (4)	8	3.6	0	0	0	0
	Neurologist	8 (4)	8	3.6	0	0	0	0
	Others	72 (38)	51	26.5	18	9.3	3	2
	192 (100)	156	81.3	30	15.7	5	3	
Practice site	Hospital	81 (42)	78	40.6	2	1	1	0.5
	Private	88 (46)	70	36.4	10	5.5	8	4.1
	Polyclinic	23 (4)	20	10.4	1	0.5	2	1
	192 (100)	168	87.4	13	7.0	11	5.6	
Practice years	< 5 years	63 (33)	45	23.4	15	7.8	3	1.5
	6-10 years	48 (25)	26	13.5	18	9.4	4	2.1
	10-20 years	73 (38)	50	26.4	18	9.4	5	2.6
	>20 years	8 (4)	6	3.1	1	0.5	1	0.5
	192 (100)	127	66.1	52	27.1	13	6.8	

Twenty-five percent of respondents who use and prescribe HM in their daily practice admitted that they use reference from their colleagues who also use HM in their

practice; 25% of respondents use empirical data of HM; and 50% of respondents rely on scientific data such as toxicology and clinical trials found in journals.

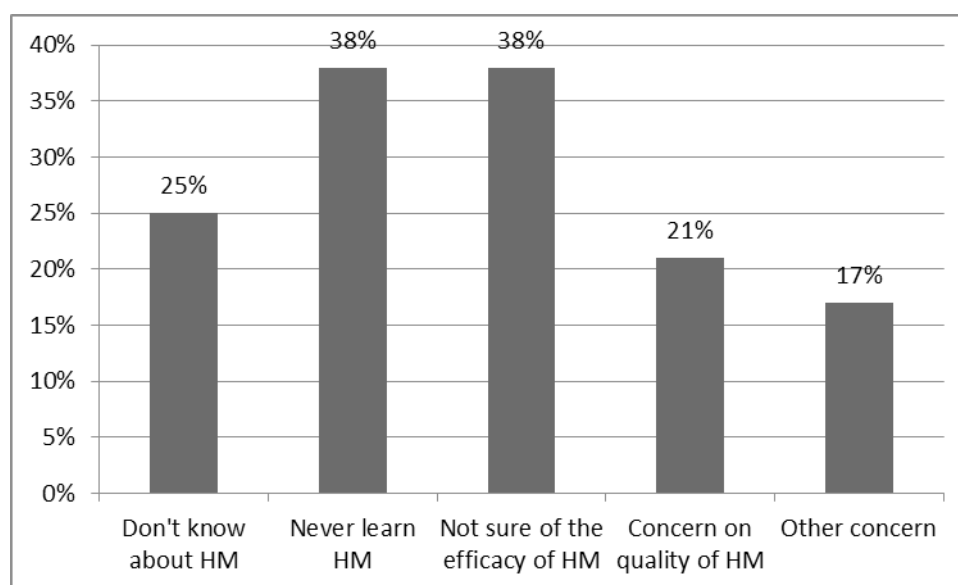


Figure 1. Distribution of respondents' reasons of not using HM

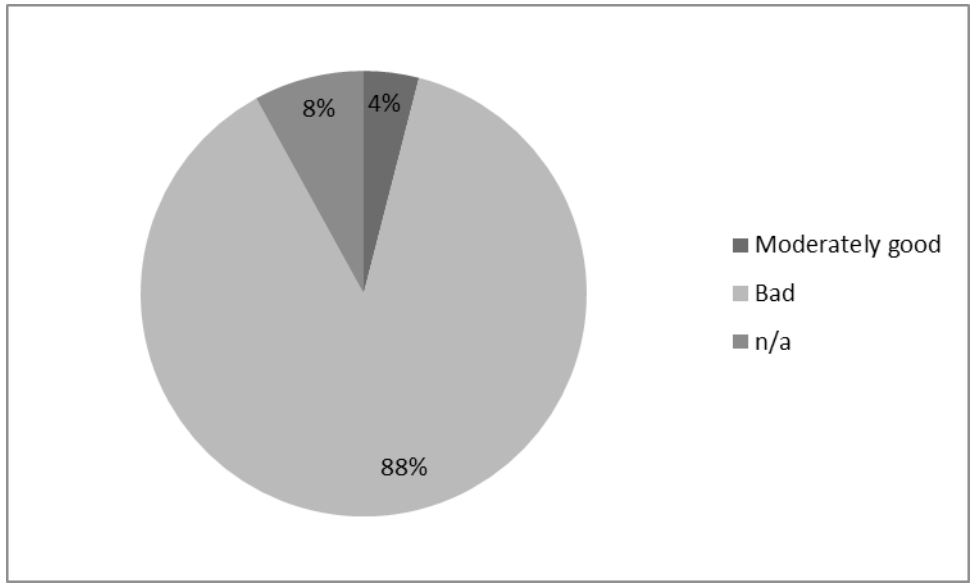


Figure 2. The quality and comprehensive information on HM

Concerning the information on HM that is needed for health care providers in deciding their options to prescribe or not prescribe is depicted in Figure 2, whilst Figure 3 shows

the suggestions from the responders on the strategies to be implemented in spreading the information on HM among the medical doctors.

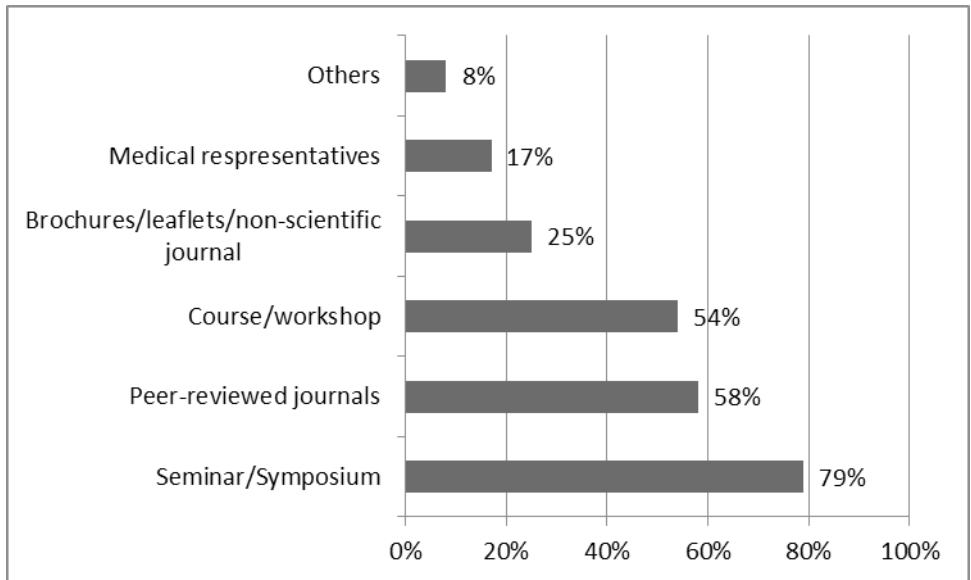


Figure 3. Suggested strategies to increase awareness and spread of information on HM to medical doctors

Discussion

The increasing trend of herbal medicine usage in the last 20 years by most of the people through self-medication is inevitable; however most of the care giver especially medical doctors are still reluctant to use HM in their daily practices. Consistent with other study¹¹, in accordance to the age, 58% of our respondents are not practicing or prescribing any HM to their patients (Table. 1) and this is due to lack of competency on HM (38%), doubtful to its efficacy (38%) or their concern on the quality or product standardization practices of HM. As depicted in Figure 1, there are two highest main reasons that respondents reluctant to use or prescribe HM, namely, their basic knowledge about HM and lack of efficacy. A survey done in the United Kingdom also revealed that knowledge and understanding were also low (very poor: 10.4%; quite poor: 36.2%, respectively). Around 75% respondents answered that in some circumstances HM did help and 22.2% of them even did not believe in HM.¹² In order to increase comprehensive information on HM's efficacy and safety to medical doctors, our study showed (Figure 3) that seminars and symposiums second to publication in peer-reviewed journals would be an effective strategies.

It is shown in some studies, although the use of HM in general practice and in public are increased, knowledge and information on HM were insufficient either in teaching hospital or in school of pharmacies.^{2,4,13,14} These facts are in accordance to our results (Figure 2). Furthermore, a comprehensive literature and learning methods on HM in Indonesia are not yet available. In some countries pharmacopeia of HM are available not only to health personnel but also to public. Information about HM is made obviously even easier through web-based database that is accessible to the people.^{12,15,16}

One important issue that was brought by respondents is evidence of clinical efficacy of HM which should be made through rigorous (controlled and randomized) clinical trial.^{1,17,18} Traditional chinese medicine (TCM) and Indian traditional medicine, particularly, have been studied according to the Consolidated Standards of Reporting Trials (CONSORT) approach, but clinical trial of Indonesian HM is still rare or the studies are still focus on pre-clinical trials.^{16,17,19} Recently, Rochsismandoko *et al*²⁰ published their clinical trial results of propolis, a resin collected by bee from various plants, which contain among others flavonoids, phenolic acids, vitamins, amino acids on patients with dengue hemorrhagic fever (DHF). It showed that propolis could shorten the length-of-stay (LOS) of the patients. This study, thought to be the first clinical trial of its kind in Indonesia, was conducted in single-blinded randomized-controlled trial mode, with only 20 patients. To increase the level of the clinical evidence, further study with more numbers of patients should be done.

Early exposure of knowledge and practice of HM to medical students are important so many doctors will prescribe HM to their patients in the future. As it is acknowledged by the respondents in this study that most of conventional medical schools, except in some medical schools in China, have not accepted or adopted the complementary and alternative medicine (CAM), including herbal medicine, into their curricula. If CAM is to be included in the curriculum, issues related to the origin of culture, beliefs and practices within the particular society, like Ayurveda mostly practiced in India, and TCM in China should be put into consideration. Medical schools in Indonesia, for example, can not directly place Ayurveda or TCM or others from various cultures into the curricula. Some of the Indonesian traditional

medicine, unfortunately, is not well written or documented as a complete system of knowledge and practice of health like the conventional medicine.¹⁷ Therefore, we have to gather and collect amount of data of ethno botany and ethno pharmacology from various parts of Indonesia and start to establish a comprehensive knowledge of traditional health system.

Conclusions

The findings of this survey indicate that despite the endorsement of Indonesian government to health providers to use HM in their daily practice, medical doctors are still reluctant to prescribe HM for their patients due to lack of comprehensive information on efficacy, safety and quality. More clinical evidences, which can be gathered from properly designed clinical trials, are still needed. Intensive dissemination through publications in peer-reviewed journals, seminars, workshops and courses could also enhance the knowledge of medical doctors on HM. Moreover, HM could be introduced and taught to medical students which could enhance the perception and use of HM by medical doctors.

Reference

1. Firenzuoli F and Gori L. Herbal Medicine Today: Clinical and Research Issues. *eCAM* 2007; 4(S1):37–40.
2. Joos S, Glassen K, Musselmann B. Herbal medicine in primary care in Germany: The patient's perspective. *Evidence-Based Complement Alternat Med*. 2012, doi: 10.1155/2012/294638.
3. Yi-Hsien Lin, Kuang-Kuo Chen, and Jen-Hwey Chiu. Co-prescription of Chinese herbal medicine and western medications among prostate cancer patients: A population-based study in Taiwan. *Evidence-Based Complement Alternative Med*. 2012, doi:10.1155/2012/147015.
4. Ghia Canna J and Jha Rajesh K. Influence of knowledge on attitude and practice of health care professionals regarding use of herbal medicines in a tertiary care teaching hospital: A cross-sectional survey. *Internation J Res Pharmaceut Biomed Scien*. 2012; 3 (3): 1215-9.
5. WHO Guidelines for assessing quality of herbal medicine with reference to contaminants and residues. 2007. [cited 2012 June]; Available from <http://apps.who.int/medicinedocs/documents/s14878e/s14878e.pdf>.
6. WHO Guidelines on good manufacturing practices (GMP) for herbal medicines. 2007. [cited 2012 July]; Available from <http://apps.who.int/medicinedocs/documents/s14215e/s14215e.pdf>
7. Janamian T, Myers SP, O'Rourke P, and Eastwood H. Responding to GPs' information resource needs: implementation and evaluation of complementary medicines information resource in Queensland general practice. *BMC Complement Alternat Med*. 2011, 11:77.
8. Menteri Kesehatan Republik Indonesia. Keputusan Menteri Kesehatan Republik Indonesia No. 0584/MENKES/SK/VI/1995 Tentang Sentra Pengembangan dan Penerapan Pengobatan Tradisional. [cited 2012 January]; Available from http://tradkom.com/wp-content/uploads/2013/02/2_Kepmenkes_1995_0584_Pembentukan-Sentra-P3T.pdf.
9. Menteri Kesehatan Republik Indonesia. Peraturan Menteri Kesehatan Republik Indonesia Nomor: 003/MENKES/PER/I/2010 Tentang Sainifikasi Jamu dalam Penelitian Berbasis Pelayanan Kesehatan; [cited 2012 January]; Available from <http://www.gizikia.depkes.go.id/wp-content/uploads/downloads/2012/07/permenkes-003-tahun2010.pdf>.
10. Torri MC. Knowledge and risk perceptions of traditional jamu medicine among urban consumers. *European J Medicinal Plants*. 2013; 3(1): 25-39.
11. Garg V, Dhar VJ, Sharma A, Dutt R. Facts about standardization of herbal medicine: A review. *J Chinese Integrat Med*. 2012; 10: 1077-82.
12. Anonym. Results of Survey on Herbal Medicines. *Drug and Therapeutics Bulletin (DTB)*; [cited 2012 June]; Available from <http://press.psprings.co.uk/dtb/april/herbmedsurvey.pdf> on June 2012.
13. Fahmy SA, Abdu S, Abuelkhair M. Pharmacists' attitude, perceptions and knowledge towards the use of herbal products in Abu Dhabi, United Arab Emirates. *Pharmacy Pract*. 2010; 8(2):109-115.
14. Rehman U, Murtaza G, Azhar S, Noreen S, Khan A, Khan A, et al. An evaluation of Pakistani

- pharmacy students' knowledge of herbal medicines in Pakistan. *African J Pharmacy Pharmacol.* 2012; 6(3): 221-4.
15. Kraft K, Hobbs C. *Pocket guide to herbal medicine.* Stuttgart: Thieme; 2004.
 16. Hu J, Zhang J, Zhao W, Zhang Y, Zhang L, Shang H. Cochrane systematic reviews of Chinese Herbal Medicines: an overview. *PLoS ONE* 6(12): e28696. doi:10.1371/journal.pone.0028696.
 17. Dewoto HR. Pengembangan obat tradisional Indonesia menjadi fitofarmaka. *Maj Kedokt Indon.* 2007; 7: 205-11.
 18. R Guo, P H Canter, E Ernst. A systematic review of randomised clinical trials of individualised herbal medicine in any indication. *Postgrad Med J.* 2007; 83:633-7.
 19. Gebiski V, Marschner I, Keech AC. Specifying objectives and outcomes for clinical trials. *Med J Aust.* 2002; 176: 491-2.
 20. Rochsismandoko, Eppy, Diana PP, Syafiq A, Utami S, H AznanLelo, *et al.* Uji klinis propolis ekstrak (propolis ekstrak) pada pasien demam berdarah dengue. *Medika.* 2013; XXXIX, 2: 103-11.