

# Comparison of Clients or Patients Attending Monk Healers and Primary Care Clinics in Thailand: A Cross-sectional Study

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## ABSTRACT

**Objective:** This study aimed to compare characteristics of clients or patients presenting to monk healers and primary care health facilities in Thailand. **Methods:** Consecutively attending clients or patients of three monk healers or three health centres were assessed with self-reported measures of health status, symptoms and perceptions. **Results:** The total sample included 1251 participants, 607 from the monk healers and 644 from the health centres. Most participants in the temple and health facility sites were female (76.6% and 72.8%, respectively). Compared to patients attending the health centres, clients of monk healers were younger in age, better educated, and had a higher economic status. The prevalence of heart attack or stroke, emphysema or asthma, sore joints, osteoporosis, cancer, migraine headaches, mental disorder, depression, sleeping problem, and tobacco use problem was significantly higher among clients of monk healers than health care centre patients. While, the prevalence of hypertension and diabetes, was significantly higher among health centre patients than monk healer clients. Main symptoms or problems referring to psychological, social, spiritual, and female genital were significantly more frequent in clients attending monk healers than health centre patients, while main symptoms or problems referring to musculoskeletal, neurological, cardiovascular, digestive, and general and unspecified were significantly more frequent in health centre patients than clients attending monk healers. The causes or aetiology of psycho-social, supernatural and economic were significantly higher among monk healer than health centres clients, while the causes or aetiology behavioural, natural and physical were significantly higher among health centre than monk healer clients. **Conclusion:** The study found a high proportion of psychological, social, spiritual, and female genital problems among clients attending monk healers, calling for an integrated approach of primary health care.

**Keywords:** Patient characteristics, Monk healer, Primary care, Thailand

## Introduction

"In Thailand there are 61,416 full-time monks and about 32,000 monasteries. The Sangha (brotherhood of monks) in Thailand consists of about 200,000 monks (full-time and part-time monks) and 85,000 novices at most times of the year." [1] "Many monks who become ordained for their entire lives serve as scholars or teachers, with some specializing in healing, folk magic, fortune telling, and astrology." [1] "Traditional healers, including spiritual, herbal, and monk healers, are distributed all over Thailand" [2]. Buddhist monks who are Thai traditional healers are called maw pra (monk

healer) and they provide treatment, including Thai traditional medicine and indigenous practices, to the public at the Buddhist temple where they reside [3,4]. Monk healers treat a variety of ailments, including common mental and substance use disorders in Thailand [5,6]. In a case study of a rural Mahayana Buddhist temple, "it seems that the temple is a primary care center to support physical, mental, and spiritual illnesses. The main therapeutic actions include the following: a) Using a standard Chinese herb regimen for treatment, b) Meditation, and c) Eating vegetarian food." [4] In another case study of a monk healer in central Thailand,

patients are treated with digestive, respiratory, skin, neurological, pain, and muscle symptoms, including temporary paralysis, diabetes, and cancer [3]. In a survey of clients use of traditional and complementary medicine practitioners in Thailand, the most frequently mentioned providers included massage therapist, herbalist, acupuncturist and monk healer [7].

However, little is known about the characteristics of patients that chose traditional health practitioners, such as monk healers, in comparison to patients consulting medical primary care services in Thailand. In a comparative study among patients treated by physicians and folk healers in Taiwan, no differences were found in terms of the socioeconomic status of the attendees between both health systems [8]. However, in terms of sickness type, the prevalence of mild acute, chronic stable, and somatization was significantly higher in patients attending folk healers, and the prevalence of severe acute and chronic acute cases was significantly higher among patients attending physicians [8]. In a study comparing patients attending traditional healers and those attending primary health clinics in urban Tanzania found that the prevalence of having a common mental disorder was significantly higher among traditional healer patients (48%) compared to primary care patients (24%) [9], and in an investigation comparing patients consulting complementary medicine and general practitioners in Germany showed that patients consulting complementary medicine practitioners were more likely to be female, had higher education, had more psychological symptoms and had symptoms for a longer time duration than patients attending general practitioners [10]. This study aimed to compare characteristics of clients or patients presenting to monk healers and primary care health facilities in Thailand.

## Methods

### *Sample and procedure*

This is a cross-sectional study of adult patient seeking either care from a monk healer or a health care centre. It was carried out in four districts in the central and eastern region of Thailand. The three temples and three health centres selected were based on purposeful sampling, being the inclusion criteria to have at least five clients or patients a day. Consecutively attending clients or patients of any of the six study sites were recruited into the study over a period of four months in 2018/2019. In each study site, a trained external interviewer (professional nurse) was placed to interview clients or patients on health symptoms and perceptions and collect demographic information after written informed consent was obtained. The descriptions were written down verbatim. The study protocol was approved by the “Office of The Committee for Research Ethics (Social Sciences), Mahidol University (No.: 2017/055.1403)”, and study permission was obtained from the study sites. The questionnaire was translated and back-translated by two independent bilingual

researchers into the study language Thai. The study questionnaire was pretested for validity on a sample of 30 patients, which do not form part of the final sample.

### *Measures*

Sociodemographic information included, sex, age, marital status, education, religion, and employment status. Economic status was assessed with the question, “Are you in debt?” (Response options: “No, little, high”).

Chronic conditions. Clients were asked about 16 health care provider diagnosed chronic conditions, such as asthma, diabetes, emphysema, and hypertension (see Table 2).

Symptoms and explanatory models. A short form of the Short Explanatory Model Interview was used to explore emic perspectives of illness [11], as follows: “1) What have you come to see the doctor/healer/monk/health care provider about? (List up to three reasons), 2) What do you call these problems? 3) How long ago did you first notice these problems? 4) What is the cause of you getting these problems?”

### *Data analysis*

The sample is described using frequencies, means, and standard deviations. Parametric tests are used for continuous and Pearson chi-square tests for categorical variables. Verbatim descriptions of symptoms or problems and causes or explanatory models were content analysed in Thai and translated to English and back-translated to Thai by two independent bi-lingual experts. The main symptoms or problems were subsequently classified using the International Classification of Primary Care (ICPC2) [12]. The Barts Explanatory Model Inventory was used to classify the perceived causes of main symptoms and problems [13], including Thai culture-specific concepts [14-17] (see Table 3). The coding of individual responses documented in the verbatim scripts were compared for agreement by two independent researchers, and disagreements were discussed and reconciled. The quantitative data were analysed using IBM-SPSS for Windows, version 25 (Chicago, IL, USA).

## Results

### *Sociodemographic sample characteristics of patients or clients*

The total sample included 1251 participants (response rate 97%), 607 from the monk healers and 644 from the health centres. Most participants in the temple and health facility sites were female (76.6% and 72.8%, respectively) and all were Buddhists by religion. Compared to patients attending the health centres, clients of monk healers were younger in age, better educated, and had a higher economic status (less debts) (see Table 1).

**Table 1** Sociodemographic of participants attending monk healers and primary care health centres (N=1,251)

| Variable                          | Monk healer               | Health centre             | p-value |
|-----------------------------------|---------------------------|---------------------------|---------|
|                                   | Sample<br>M (SD)<br>N (%) | Sample<br>M (SD)<br>N (%) |         |
| <b>Age in years</b>               | 47.3 (13.8)               | 53.3 (14.1)               | <0.001  |
| <b>All</b>                        | 607                       | 644                       |         |
| <b>Sex</b>                        |                           |                           |         |
| Female                            | 465 (76.6)                | 469 (72.8)                | 0.254   |
| Male                              | 142 (23.4)                | 175 (27.2)                |         |
| <b>Formal education</b>           |                           |                           |         |
| Primary or less                   | 225 (38.5)                | 404 (64.6)                | <0.001  |
| Secondary                         | 185 (31.7)                | 166 (26.6)                |         |
| Post-secondary                    | 174 (29.8)                | 55 (8.8)                  |         |
| <b>Marital status</b>             |                           |                           |         |
| Single/divorced/separated/widowed | 250 (41.7)                | 145 (22.9)                | <0.001  |
| Married                           | 350 (58.3)                | 489 (77.1)                |         |
| <b>Employment status</b>          |                           |                           |         |
| No                                | 192 (32.0)                | 169 (26.4)                | 0.127   |
| Yes                               | 408 (68.0)                | 467 (73.6)                |         |
| <b>In debt</b>                    |                           |                           |         |
| No/Little                         | 436 (71.8)                | 474 (73.6)                | 0.481   |
| High                              | 171 (28.2)                | 170 (26.4)                |         |

M=Mean, SD=Standard deviation

**Table 2** Chronic conditions in participants attending monk healers and primary care health centres

| Variable                                    | Monk healer | Health centre | p-value |
|---------------------------------------------|-------------|---------------|---------|
|                                             | N (%)       | N (%)         |         |
| High blood cholesterol                      | 115 (19.1)  | 105 (16.3)    | 0.182   |
| Migraine headaches                          | 103 (17.1)  | 79 (12.2)     | 0.014   |
| Hypertension                                | 102 (17.0)  | 180 (27.9)    | <0.001  |
| Sleeping problem                            | 96 (16.0)   | 68 (10.5)     | 0.004   |
| Fatigue disorder                            | 90 (15.0)   | 102 (15.8)    | 0.691   |
| Sore joints, e.g., arthritis, gout          | 71 (11.8)   | 40 (6.2)      | <0.001  |
| Ulcer (a stomach, duodenal or peptic ulcer) | 69 (11.5)   | 69 (10.7)     | 0.659   |
| Depression                                  | 59 (9.8)    | 39 (6.0)      | 0.013   |
| Diabetes                                    | 52 (8.7)    | 88 (13.6)     | 0.005   |
| Heart attack or stroke                      | 48 (8.0)    | 15 (2.3)      | <0.001  |
| Osteoporosis                                | 40 (6.7)    | 12 (1.9)      | <0.001  |
| Cancer or a malignancy of any kind          | 36 (6.0)    | 10 (1.5)      | <0.001  |
| Emphysema/asthma                            | 34 (5.7)    | 13 (2.0)      | <0.001  |
| Tobacco use problem                         | 32 (5.3)    | 15 (2.3)      | 0.005   |
| Mental disorder                             | 24 (4.0)    | 11 (1.7)      | 0.014   |
| Pain                                        | 23 (3.8)    | 24 (3.7)      | 0.917   |
| Alcohol use problem                         | 22 (3.7)    | 19 (2.9)      | 0.477   |
| Epilepsy                                    | 8 (1.3)     | 6 (0.9)       | 0.500   |

*Comorbidities of patients or clients*

Among clients attending a monk healer, the highest prevalence of comorbidities was high blood cholesterol (19.1%), followed by migraine headaches (17.1%), hypertension (17.0%) and sleep problems (16.0%), the highest prevalence of comorbidities among health centre patients was hypertension (27.9%), high blood cholesterol (16.3%), fatigue disorder (15.8%) and diabetes (13.6%). The prevalence of heart attack or stroke, emphysema or asthma, sore joints, osteoporosis, cancer, migraine headaches, mental disorder, depression, sleeping problem, and tobacco use problem

was significantly higher among clients of monk healers than health care centre patients. While, the prevalence of hypertension and diabetes was significantly higher among health centre patients than monk healer clients (see Table 2).

*Main symptoms or problems*

For clients of the monk healer, the major main symptom or problem referred to the musculoskeletal system (30.9%), followed by psychological (26.4%), spiritual (25.0%), neurological (13.3%), digestive (8.8%), and social (5.9%).

For example:

*"I feel so tired, leg pain, can not get up and unable to walk."* (female, 92 years)

*"I feel stressed, fatigue, powerless and cannot sleep."* (female, 81 years)

*"Want to stop smoking methamphetamine, family problems."* (male, 26 years)

*"To stop smoking and to stop drinking."* (male 38 years)

*"I am stressed with the illness of my family members, and also have so much debt and problems in my workplace"* (female, 44 years)

*"I come for creating prestige by making merit and meditation, because I wanted to buy a house."* (female, 46 years)

*"I wanted to do longevity ceremony, exorcise for making better life, income, health and many other things to become better."* (female, 52 years)

*"I am come for charitable dedication, make merit, remove karma and be compassionate with people with previous deeds for each other"* (female, 61 years)

*"I am asking for when I can have a baby, I am so worried that I will not have a baby."* (female, 30 years)

*"I am coming to have magic water shower because I have been visited by the ghost, so often I feel fatigue, tired and cannot sleep."* (female, 67 years)

While for health centre patients, the major main symptom or problem referred to the musculoskeletal system (50.2%), followed by neurological (24.5%), general and unspecified (10.7%), digestive (11.0%), cardiovascular (4.3%), and endocrine/metabolic and nutritional (4.0%).

For example:

*"I have fever and too much headache."* (female, 59 years)

*"I have pain in my shoulders and arm."* (female, 47 years)

*"I come to receive medication for my hypertension, I feel so bored about everything, sad, uncomfortable, and have numbness in all fingers."* (male, 73 years)

*"I have pain in my legs, I wanted to have a traditional massage and when I go back home I also wanted to have some medication."* (male, 63 years)

*"I have flatulence, hypertension. I want to have some herbal medicine and consult about my health."* (male, 62 years)

*"I come for medication for depression, I can not sleep in the past 4 days, I hear the noise in my ears all the time."* (female, 32 years)

*"Fever and cough."* (female, 48 years)

*"Abdominal pain."* (female, 54 years)

Main symptoms or problems referring to psychological, social, spiritual, and female genitals were significantly more frequent in clients attending monk healers than health centre patients, while main symptoms or problems referring to musculoskeletal,

neurological, cardiovascular, digestive, and general and unspecified were significantly more frequent in health centre patients than clients attending monk healers (see Table 3).

#### Duration of symptoms/problems

More than half of the monk healer (51.2%) and health centre (52.8%) attendees experienced their main symptom or problem for one year or more. About a third (35.0% of monk healer and 32.3% of health centre attendees) experienced their main symptom or problem for one month or less, and 12.2% of monk healer and 16.5% of health centre attendees experienced their main symptom or problem for 2-11 months.

#### Cause/aetiology of main symptoms/problems

Among attendees of monk healers, the most prevalent cause or aetiology of the main symptom or problem was psycho-social (38.3%), followed by behavioural (30.1%) and supernatural (21.9%).

For example:

*"I was thinking too much about my work, it makes me stressed."* (female, 41 years)

*"Divorced with my wife, I was so disappointed, my wife has a new husband."* (male, 47 years)

*"I was working too much and forgot to look after my health."* (male, 31 years)

*"May be I have the ghost coming to sit and press on my arms."* (female, 31 years)

*"Ghost and committed sin, and persons with previous deeds on each other from previous life."* (female, 60 years)

*"I had an artificial abortion, so I come to cut off the karma."* (female, 45 years)

*"May be because of karma, as eventually my bone became bulging."* (male, 55 years)

*"The fortune teller told me that I have been disturbed by the ghost and evil spirits."* (female, 67 years)

While among health centre patients, the most prevalent cause or aetiology of the main symptom or problem was behavioural (42.4%), followed by physical (27.3%) and psycho-social (23.0%).

For example:

*"The cause is I am addicted to alcohol, I wanted to quit, but when I feel craving for drinking alcohol, I am so stressed."* (male, 64 years)

*"Standing, sitting for a long time."* (male, 58 years)

*"Eating a lot fast and not chew."* (female, 55 years)

*"I was thinking too much, no one helps me, I have to look after grandchildren"* (female, 68)

*"I was working very hard, restless, and never have regular meals."* (female, 55 years)

**Table 3** Main symptoms/problems

| Variable                                         | Monk healer | Health centre | p-value |
|--------------------------------------------------|-------------|---------------|---------|
|                                                  | %           | %             |         |
| Musculoskeletal                                  | 30.9        | 50.2          | <0.001  |
| Psychological                                    | 26.4        | 1.5           | <0.001  |
| Spiritual                                        | 25.0        | 0.0           | <0.001  |
| Neurological                                     | 13.3        | 24.5          | <0.001  |
| Digestive                                        | 8.8         | 11.0          | <0.001  |
| Social                                           | 5.9         | 0.0           | <0.001  |
| General and unspecified                          | 5.4         | 10.7          | <0.001  |
| Endocrine/metabolic and nutritional              | 4.4         | 4.0           | 0.089   |
| Female genital                                   | 2.9         | 0.0           | <0.001  |
| Cardiovascular                                   | 2.5         | 4.3           | 0.004   |
| Respiratory                                      | 1.0         | 1.2           | 0.365   |
| Eye                                              | 0.5         | 0.9           | 0.876   |
| Blood, blood forming organs and immune mechanism | 0.5         | 0.0           | 0.342   |
| Skin                                             | 0.1         | 0.3           | 0.876   |
| Ear                                              | 0.0         | 0.6           | 0.354   |
| Urological                                       | 0.0         | 0.0           | -       |
| Male genital                                     | 0.0         | 0.0           | -       |

**Table 4** Cause/aetiology of main symptoms/problems

| Variable                                                                                  | Monk healer | Health centre | p-value |
|-------------------------------------------------------------------------------------------|-------------|---------------|---------|
|                                                                                           | %           | %             |         |
| Psycho-social<br>(stress, work/family/marital problem, loss/bereavement, trauma/shock)    | 38.3        | 23.0          | <0.001  |
| Supernatural<br>(destiny/fate, bad luck, <i>karma</i> (=past actions))                    | 21.9        | 1.2           | <0.001  |
| Behavioural<br>(diet, substance abuse, imbalance hot/cold, work related strain, accident) | 30.1        | 42.4          | <0.001  |
| Natural<br>(wind/weather, climate, astrology)                                             | 0.0         | 6.1           | <0.001  |
| Physical<br>(illness, disability, heredity, virus/germ)                                   | 7.1         | 27.3          | <0.001  |
| Economic<br>(financial)                                                                   | 2.7         | 0.0           | <0.001  |

*"I built my new house, and a lot in debt, my corps get lower price, make me feel so stressed with my much lower income."* (female, 56 years)

*"Hereditary."* (male, 45 years)

*"Stress, family problems."* (female, 44 years).

The causes or aetiology of psycho-social, supernatural, and economic were significantly higher among monk healer than health centres clients, while the causes or aetiology, of behavioural, natural and physical were significantly higher among health centre than monk healer clients (see Table 4).

## Discussion

Based on our knowledge, this investigation seems to be the first assessing patient/client characteristics (demographics, chronic conditions, main symptom/problem, and perceptions of causes of main symptom/problem) among attendees of monk healers in

comparison with health centre attendees in Thailand. We discovered similarities but also a number of major differences between monk health and health centre attendees. Compared to patients attending the health centres, clients of monk healers were significantly younger in age, better educated, and had a higher economic status (less debts), but there were no sex differences. Significantly more clients with psychological, social, spiritual, and female genital problems consulted monk healers compared to health centres. Moreover, clients consulting monk healers seem to have more frequently migraine headaches, cancer, osteoporosis, sore joints, emphysema or asthma, heart attack or stroke, mental disorder, depression, sleeping and tobacco use problems. In terms of long-term complaints, we did not find significant differences between the two client groups. Causative concepts of main symptom or problem differed significantly between the two client groups, with a preponderance of

psycho-social and supernatural causation among monk healer attendees and behavioural and physical causation among health centre attendees.

Previous studies have also shown a higher prevalence of psychological problems among clients of traditional health practitioners compared to primary care attendees. Similar results were found in a study in Tanzania, comparing the prevalence of common mental disorders among attendees of traditional healers and primary care clinics [9], and in Germany, comparing attendees of complementary medicine and general practitioners [10]. It may be that monk healers are better placed to deal with psychological, spiritual and social problems than primary health care providers may. More research is needed on the treatment approach to these cases of monk healers in relation to their diagnosis, management, and treatment outcomes, such as naturalistic prospective investigations [9].

The largest proportion of attendees of both systems (monk and health centre) had symptoms referred to the musculoskeletal system. Similar findings were found among attendees in general practices in the central region of Denmark [18] and attendees of complementary medicine and general practitioners in Germany [10]. In both systems (monk healer and health centre), one of the most popular management of symptoms referred to the musculoskeletal system is Thai traditional massage. For example, massage therapy, including aromatherapy, herbal compression balls, and herbal sauna, was one of the most popular treatments in a monk healer setting in central Thailand [3], and “it is estimated that among Thai people seeking care in public health facilities 10% receive Thai traditional medicine, which may include Thai traditional massage, herbal steam bath, traditional herbal medicines and acupuncture.” [19]

Among monk healer attendees psycho-social, behavioural, and supernatural causation were the most prevalent. Supernatural causation may include spirits, black magic, and karma (past actions), e.g., “if the diagnosis is that a patient in some way has offended and angered a spirit, who in retaliation has caused the offender to fall sick, then the curing process may consist of ritual offerings only” [14] In a study among somatoform disorder and first episode depression psychiatric out-patients in North India also a high proportion reported “karma-deed-heredity” as the causal models for their symptoms demonstrating the cultural influence on causal models held [20,21]. A better understanding of the explanatory illness models will help in the provision of culturally acceptable health care [22].

Unlike in previous studies in Taiwan [8] and Germany [10], this study did not find significant differences in the prevalence of long-term complaints between the two health systems. This may be explained by the observation that in both systems different long-term conditions were managed, e.g., psychological, spiritual, and female genitals in monk healer attendees,

and, e.g., musculoskeletal, neurological, and cardiovascular in health centre attendees. In addition, clients with long-term conditions, e.g., heart attack or stroke, sore joints, emphysema or asthma, cancer, migraine headaches, tobacco use problem and osteoporosis were more prevalent among monk healer than health centre attendees, and patients with long-term conditions, e.g., hypertension, and diabetes were more prevalent among health centre than monk healer attendees. In addition, as long-term conditions increase with age, attendees of health centres were significantly older in age than attendees of monk healers.

Some previous investigations [7,10,23-25] have shown that female sex, older age, and lower socioeconomic status were associated with more frequent utilization of traditional health practitioners than medical health services, while in this study, younger age, better education, and higher economic status (less debt) were associated with the utilization of monk healers, and there were no significant sex differences in the utilization pattern of traditional and/or complementary medicine providers. Former research in Indonesia [24], Malaysia [23], and Thailand [7] also did not find significant sex differences in the utilization of traditional and/or complementary medicine. It is possible that monk healers, rather than traditional Thai health practitioners, similar to the use of complementary medicine [7,10], are more attractive to young, educated and middle class Thais. Overall, there was a preponderance of female patients in both health service sites. This may be explained by the nature of health centres, being “the first point of contact for the population for preventive, promotive, and basic curative services.” [26]

#### *Study limitations*

The study was limited by the self-report of the data. Future studies should elicit information on the health seeking pattern and the subjective evaluation of the treatment received.

#### **Conclusions**

The study found a high proportion of psychological, social, spiritual, and female genital problems among clients attending monk healers, calling for an integrated approach of primary health care in Thailand.

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#### **References**

- [1] Facts and details. Buddhist monks in Thailand, 2019. URL: [http://factsanddetails.com/southeast-asia/Thailand/sub5\\_8b/entry-3214.html](http://factsanddetails.com/southeast-asia/Thailand/sub5_8b/entry-3214.html) (accessed 2 September 2019)
- [2] Adthasit R, Kulsomboon S, Chantraket R, Suntananukan S, Jirasatienpong P. The situation of knowledge management and research in the

- area of local wisdom in health care. In: Petrakard P, Chantraket R, editors. The report situations of Thai traditional medicine, indigenous medicine and alternative medicine 2005–2007. Nonthaburi: Mnat Films; 2007. p. 16–22.
- [3] Chan-iam W, Yodmalee B, Nakornriab M. Thai Traditional Medicine at Wat Nong Ya Nang Buddhist, Uthai Thani Province. *Journal of Food Health and Bioenvironmental Science* (May-August 2019), 12(2): 40-47.
- [4] Kaewla W, Wiwanitkit V. Local primary health care by local religious center: A case study of a Mahayana Buddhist temple, Thailand. *Ann Trop Med Public Health* 2015;8:226.
- [5] Phramaha Phanuvit Pannapajato (2013). Buddhist approach to disease burring with mental treatment. *Journal of Graduate Studies Review*, Nakhon Sawan Buddhist College, 2(1), 26-27.
- [6] Jilek-Aall L, Jilek WG (1985) Buddhist Temple Treatment of Narcotic Addiction and Neurotic-Psychosomatic Disorders in Thailand. In: Pichot et al. (Eds.) *Psychiatry The State of the Art* (pp. 673-677). Springer. New York
- [7] Peltzer K, Pengpid S, Puckpinyo A, Yi S, Anh le V. The utilization of traditional, complementary and alternative medicine for non-communicable diseases and mental disorders in health care patients in Cambodia, Thailand and Vietnam. *BMC Complement Altern Med*. 2016;16:92. doi:10.1186/s12906-016-1078-0
- [8] Kleinman A, Gale JL. Patients treated by physicians and folk healers: a comparative outcome study in Taiwan. *Cult Med Psychiatry*. 1982;6(4):405-423. doi:10.1007/BF00118886
- [9] Ngoma MC, Prince M, Mann A. Common mental disorders among those attending primary health clinics and traditional healers in urban Tanzania. *Br J Psychiatry*. 2003;183:349-55.
- [10] Krug K, Kraus KI, Herrmann K, Joos S. Complementary and alternative medicine (CAM) as part of primary health care in Germany- comparison of patients consulting general practitioners and CAM practitioners: a cross-sectional study. *BMC Complement Altern Med*. 2016;16(1):409. doi:10.1186/s12906-016-1402-8
- [11] Lloyd KR, Jacob KS, Patel V, St Louis L, Bhugra D, Mann AH. The development of the Short Explanatory Model Interview (SEMI) and its use among primary-care attenders with common mental disorders. *Psychol Med*. 1998;28(5):1231-7.
- [12] Soler JK, Okkes I, Wood M, Lamberts H. The coming of age of ICPC: celebrating the 21st birthday of the International Classification of Primary Care. *Fam Pract*. 2008;25(4):312-317. doi:10.1093/fampra/cmn028
- [13] Rüdell K, Bhui K, Priebe S. Concept, development and application of a new mixed method assessment of cultural variations in illness perceptions: Barts Explanatory Model Inventory. *J Health Psychol*. 2009;14(2):336-347. doi:10.1177/1359105308100218
- [14] Brun V. Traditional Thai medicine. In: Selin H & Shapiro H (eds.) *Medicine across cultures: History and practice of medicine in non-western cultures* (pp. 115-132). Secaucus, NJ, USA: Kluwer Academic Publishers.
- [15] Chokevivat V, Chuthaputti A. The role of Thai traditional medicine in health promotion, 2005. From <http://thaimedicinezone.com/wp-content/uploads/2014/09/Chokevivat-Chuthaputti-2005.pdf> (Retrieved 12 Febr 2020)
- [16] Mulholland J. Thai traditional medicine: Ancient thought and practice in a Thai context, 1976. URL: [https://thesiamsociety.org/wp-content/uploads/1979/03/JSS\\_067\\_2i\\_Mulholland\\_ThaiTraditionalMedicine.pdf](https://thesiamsociety.org/wp-content/uploads/1979/03/JSS_067_2i_Mulholland_ThaiTraditionalMedicine.pdf) (accessed 2 April 2020)
- [17] Ganhanapan A. Changing power and positions of Mo Muang in Northern Thai healing rituals. *J Siam Society*. 2000;88(1&2): 58-71.
- [18] Rosendal M, Carlsen AH, Rask MT, Moth G. Symptoms as the main problem in primary care: A cross-sectional study of frequency and characteristics. *Scand J Prim Health Care*. 2015;33(2):91-99. doi:10.3109/02813432.2015.1030166
- [19] Department for Development of Thai Traditional and Alternative Medicine, Ministry of Public Health. Thailand: chronological development; 2011. Available from [http://globinmed.com/index.php?option=com\\_content&view=article&id=105160:thailand&catid=196:country-scenario](http://globinmed.com/index.php?option=com_content&view=article&id=105160:thailand&catid=196:country-scenario). (Accessed October 1, 2019)
- [20] Grover S, Aneja J, Sharma A, et al. Explanatory models of somatoform disorder patients attending a psychiatry outpatient clinic: a study from North India. *Int J Soc Psychiatry*. 2014;60(5):492-498. doi:10.1177/0020764013501484
- [21] Grover S, Kumar V, Chakrabarti S, et al. Explanatory models in patients with first episode depression: a study from north India. *Asian J Psychiatr*. 2012;5(3):251-257. doi:10.1016/j.ajp.2012.07.003
- [22] Shankar BR, Saravanan B, Jacob KS. Explanatory models of common mental disorders among traditional healers and their patients in rural south India. *Int J Soc Psychiatry*. 2006;52(3):221-233. doi:10.1177/0020764006067215
- [23] Hasan SS, Ahmed SI, Bukhari NI, Loon WC. Use of complementary and alternative medicine among patients with chronic diseases at outpatient clinics. *Complement Ther Clin Pract*. 2009;15(3):152-157. doi:10.1016/j.ctcp.2009.02.003

- [24] Pengpid S, Peltzer K. Utilization of traditional and complementary medicine in Indonesia: Results of a national survey in 2014-15. *Complement Ther Clin Pract*. 2018;33:156-163. doi:10.1016/j.ctcp.2018.10.006
- [25] Peltzer K, Pengpid S. Prevalence and Determinants of Traditional, Complementary and Alternative Medicine Provider Use among Adults from 32 Countries. *Chin J Integr Med*. 2018;24(8):584-590. doi:10.1007/s11655-016-2748-y
- [26] Tangcharoensathien V, Witthayapipopsakul W, Panichkriangkrai W, Patcharanarumol W, Mills A. Health systems development in Thailand: a solid platform for successful implementation of universal health coverage. *Lancet*. 2018;391(10126):1205-1223. doi:10.1016/S0140-6736(18)30198-3