

Siddha versus Ayurveda Medical Practice in Singapore: Heterogeneous versus Globalized Practices

Brigitte Gille Sébastia

▶ To cite this version:

Brigitte Gille Sébastia. Siddha versus Ayurveda Medical Practice in Singapore: Heterogeneous versus Globalized Practices. [Research Report] French Institute of Pondicherry; Asian Research Institute, National University of Singapore (visiting scholar). 2019. hal-03110846

HAL Id: hal-03110846

https://hal.science/hal-03110846

Submitted on 14 Jan 2021

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers. L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Siddha versus Ayurveda Medical Practice in Singapore: Heterogeneous versus Globalized Practices¹

Brigitte Sebastia



Introduction: context of the study

Siddha medicine and ayurveda are the two pan-Indian medicines included in AYUSH,² the department of traditional medicines of the Ministry of Health and Family Welfare of India established in 2014. The latter is widespread in India while the former is the traditional medicine mostly used by Tamil people residing in Tamil Nadu, in parts of Indian states such as Kerala, Karnataka and Andhra Pradesh, and in cities such as Mumbai or Delhi. Ayurveda is well known worldwide and is practised and used by Indians and/or non Indians, according to the country where it is established. Siddha medicine, in contrast, is hardly known abroad, and its presence in a few countries is in line with a significant Tamil community in those countries. During my

¹ I am grateful to Asia Research Institute for having welcomed me as a visiting scholar for five weeks in February-March2019. I express my deep gratitude to the siddha and ayurveda practitioners who gave as much time as they could to share with me their medical experience in Singapore and in Malaysia. I think especially of Mr Mathivaran who did not hesitate to spend a part of his Sunday to drive me to the aged informal siddha practitioner.

² AYUSH refers to Ayurveda, Yoga/Naturopathy, Unani (Greco-Arab medicine), Siddha and Homeopathy. From the use of pan-Indian medicines, I exclude medicines which did not originate in India, among them Unani, a medical system composed of Greek, Arab and Indian influences, Homeopathy and Naturopathy, as well as Yoga which is not systematically practised for medical purposes.

twelve-year ethnographical study of siddha medicine in South India, many practitioners and some pharmaceutical companies informed me of the countries where it is practised and to where its products are exported, mentioning Malaysia and Singapore as the most important after Sri Lanka.

My search on the Internet for articles on siddha practice in Malaysia and Singapore met, however, with little success. There is, too, a scarcity of works dealing with the place of traditional Indian medicines (TIMs) in these countries. Nonetheless, the mention of TIMs in papers exploring the recourse to traditional, alternative and complementary medicines in these countries (Bishop 1998; Hasneezah et al. 2016), categorised as ayurveda (Ang and Wilkinson 2012; Chen et al. 2016; Chow et al. 2010; Lim et al. 2005; Mujar et al. 2017; Yeo et al. 2005), and as siddha (Kim 2017), as well as the mention of TIM and siddha medical practice in Malaysia in papers addressing the development of traditional medicines (Colley 1978; Ooi 1991) provide evidence of their presence. The gap between information from siddha practitioners and pharmacists emphasising the importance of their medicine in Malaysia and Singapore and the rare mentions of siddha and ayurveda in medical literature prompted me to conduct a research with the objective of exploring their place in Singapore's medical universe. Considering that Tamils constitute the bulk of the Indian ethnic group (54.17%),³ one of my concerns was to examine whether siddha medicine is playing the role of cultural identity marker and dominating the field of TIMs. This relies on the fact that, in India, siddha medicine has been benefitting from a significant revival movement supported by proponents of Tamil identity (Weiss 2009). Studying its position in Singapore might well be relevant to assessing the intensity of the relationship between Tamil identity and Tamil culture, taking into account the duration of stay of people(born in Singapore or recent migrants from India) and their professional profile (highly skilled or contractual workers). Another questioning was to investigate either exchanges and influences of knowledge and practices, and solidarity relation have occurred between TIMs (ayurveda and siddha), and between TIM and other traditional medicines, especially traditional Chinese medicine (TCM). TCM is particularly relevant for this investigation as it shares some similarities with Indian medicines regarding materia medica, notably metals and minerals, and bodily concepts. While numerous papers have documented the influences of western medical concepts and tools on traditional medicines (Hardiman 2009; Langford 1995; Leslie 1976; Leslie and Young 1992; Mukharji 2016), only a few have compared Indian and Chinese medicines in the contemporary period (Nazrul 2017; Patwardhan 2005). On the second hand, as TCM has succeeded in being legalised by the Ministry of Health (MoH) after a long battle in 2000, it may serve as a model, and possibly, as a facilitator, to TIM practitioners who are requesting a better recognition of their medical specialty.

The data presented in this paper were collected during a five-week fieldwork in February-March 2019, for which I benefitted from the status of visiting scholar at the ARI, NUS. They are based on ethnography of two siddha and eight ayurveda clinics and several shops supplying Indian remedies, all located in Little India, as well as on information coming from diverse TIM's

.

³ According to the Census of population, 2010, among 348119 Indian Resident Population, 118591 are Tamils. http://www.singstat.gov.sg/publications/publications_and_papers/cop2010/census_2010_release1/cop2010sr1.pdf Consulted on 15.06.2019

This percentage excludes the non-resident Tamil population which was estimated in December 2018 at 350 000 individuals by the Ministry of External Affair of India (https://mea.gov.in/images/attach/NRIs-and-PIOs_1.pdf).

and two TIM associations' websites. This fieldwork included a trip to Johor Bahru comprising the visit of a siddha and an ayurveda clinics.

This working paper is divided into three parts. The first part presents a comparison between ayurveda and siddha medicines with a focus on their respective cultural backgrounds in India, and provides a brief history of their introduction into British Malaya⁴ from information disseminated in articles, thesis, and books. Given the predominance of Tamils among the Indians who worked on plantations or benefitted from the British presence in this geographical area to develop commercial activities, this part will endeavour to define the place of siddha medicine. The second part details the practice of siddha and ayurveda in Singapore. Based on interviews, it will explore issues practitioners are facing related to medical and pharmaceutical laws and regulations and, as regards ayurvedic doctors, related to clientele requirements, as most of them had practised in India before migrating to Singapore. The third part will analyse actions undertaken by ayurveda and siddha practitioners to have their medicine recognised. This subject will be approached by examining the way Chinese practitioners were able to organise, develop and improve their medicine so as to succeed in having it integrated into the Singaporean public health sector. It will be also discuss the Malay policy on tradition and complementary medicines (T/CM)⁵ which has designated the TIM associations as facilitators so as to register practitioners and to control and organise TIM practice, and has allowed some of their therapies to be provided in a few hospitals.

Pan-Indian medicines and their historical presence in Malaysia and Singapore

Definition of pan-Indian medicines in Malaysia and Singapore: Siddha versus ayurveda

Siddha and ayurvedic medicines share many concepts in the realms of physiology and anatomy, such as the theory of five elements (T: aimpūtankal; S: pañcabhūtam: air, water, earth, fire, ether), of three flowing substances regulating the body state, generally translated as humours (T: muppini; S: tridoṣam: air-wind/fire/phlegm), of seven bodily constituents (T: elutātu; S: dhātu: chyle, blood, flesh, fat, bone, marrow and semen), of five organs of actions (karumēntiriyam) and of senses (ñānēntiriyam), etc., concepts related to procreation and those defining the subtle and sensible parts of the body (five states of the soul, the five sheaths of the soul, the three cosmic qualities, the eight passions, etc.). They use the same etiological and nosological conceptions as well as the same diagnostic methods. They give great importance to diet that they consider ambivalently as both the cause of diseases and as a therapeutic agent. However, they show some differences in their materia medica and pharmacopeias, the mineral and metallic material, common to both medicines, being more prevalent in siddha medicine due to its anchorage in tantrism that has favoured the development of alchemy and iatrochemistry. Alchemy-related iatrochemical processes are not unknown to ayurveda as its pharmacopeia has

_

⁴ British Malaya comprises a set of states of the Malay Peninsula and Singapore that were under the rule or control of the British from the end of 18th century till Independence granted 31 August 1957. For evolution of the states' status, see: https://en.wikipedia.org/wiki/Unfederated Malay States

⁵ This acronym is adopted in order to distinguish Traditional and Complementary Medicine from Traditional Chinese Medicine.

⁶ Regarding ayurveda theories and concepts, see: P. Kudumbiah (1999); Dominik Wujastyk (1998); Kenneth G. Zysk (1996). For siddha medicine, which defines 96 *tattuvam* (body constituents/principles) of physical, psychological and spiritual essence, consult: Anaivaari R. Anandan (2005) and N. Kandaswamy Pillai (1979).

incorporated many formulas, apparatuses, techniques and nomenclatures developed in alchemy between the 9th and 16th century in the northern part of India (White 2004; Wujastik 2013) and, according to David Gordon White (*ibid.*), a little earlier in the Dravidian region. However, some complex products (*muppu*, kaṭṭu carakku, iracamaṇi, navapāṣāṇam) - whose formulations are kept secret - which epotomise the advanced skills of the alchemists-pharmacists of earlier times, are very specific and/or iconic to siddha medicine. Some of these products are administrated in combination with remedies as catalysts to increase their potency (*muppu*, kaṭṭu carakku), and some have multiple and obscure purposes, such as performance of alchemy, magic, and spiritual-oriented yoga, and, intrinsically related to these disciplines, acquisition of supernatural powers called in Sanskrit siddhi (Natarajan 2004; Sebastia 2019; Venkatraman 1990). The term siddha is derived from siddha (S) or cittar (T), a class of yogis who would have acquired siddhi through tantric ascetic practices and used alchemical-magical substances that they prepared from formulations they received during meditation (Ganapathy 1993).

The siddha corpus, composed of alchemy, asceticism, astrology, magic and medicine and its allied disciplines such as physiology, botany and toxicology, is attributed to the *cittarkal*. They were eighteen according to Tamil tradition, but the diverse lists in books and authored manuscripts show that they may have been more than ninety (Sébastia 2018; Venkatraman 1990). The siddha tradition differs, therefore, from ayurveda whose foundation and transmission to humanity are attributed to a Vedic divine genealogy with Brahma as founder, Prajāpati, Aśvin, Indra, Rṣi and their disciples as oral transmitters, and Ātreya, Suśruta and Caraka as authors of texts (Jolly 1994). Another point of divergence is the heterodoxy of *cittarkal* marked by tantric influence (devotion oriented towards Śiva-Śakti, the male-female principle), and by Tamil identity (anti-brahmanism and anti-ritualism)(Ganapathy 1993). Consequently, the traditional siddha milieu is still pervaded by these devotional and ideological influences as we will see later when we will approach the siddha practice in Singapore, and siddha medicine is practised by people of all castes and religious affiliations.

Introduction of pan-Indian Medicines into British Malaya

.

⁷ The Dravidian region presently comprises the four South states (Andhra Pradesh, Karnataka, Tamil Nadu, and Kerala) where Dravidian languages are spoken and Dravidian kinship has been the norm (maternal uncle-niece marriage, cross-cousin marriage between niece and maternal uncle's son). The Dravidian culture exists also in some communities residing in neighbouring states, such as in some tribes of Chhattisgarh and Odisha.

⁸ According to Sambasivam Pillai (1994, Volume 5: 845-846), *muppu* is " a medicine formed by the combination of three salts - salt from fuller's earth, ammonium chloride and salt petre which respectively represent - water, vayu [wind], and fire elements (...) It is useful for rejuvenation, to consolidate mercury to prepare a pill which helps to travel in the air and it is an Universal solvent and easily reduces the mineral into red or white calcined powder to be used as medicine for various diseases."

⁹ According to Sambasivam Pillai (1991, Volume 2: 1003-1004), *katţu carakku* are "Herbs, drugs and other chemicals (...) capable of resisting the action of fire, and used for consolidating substances that can readily pass off into fumes or vapour, when subjected to fire and for melting them like gold in a crucible."

¹⁰ *Iracamani* is solidified or coagulated quicksilver. It is not specific to siddha alchemy, but is highly valued for the supernatural powers it procures for those who imbibe it. See the article of Kanchana Natarajan (2004) which focuses on the *cittar* Iramatevar.

¹¹ Navapāṣāṇam that Sambasivam Pillai defines as "the nine kinds of poisons generally sold in bazaars" (1991, Volume 4: 1571), is a solid product made from mercurial and arsenic salts.

¹² The final *kal* corresponds to the plural of names.

¹³ See this author for a discussion on the diverse traditions regarding transmission of ayurvedic knowledge (1994, Volume 5: 15).

Evidence of the introduction of pan-Indian medicines into British Malaya is scant. From the rare works which attempt to historicize them, it emerges that their introduction was related to Indians, mostly from the Madras Presidency, who were recruited by the British to work on plantations, in mines and on infrastructure projects, especially from the mid-19th century (Amrith 2010; Moorthy 2016; Ray 2014). Examining health care management in colonial Malaya, Giok Ling Ooi (1991) states that all "ethnic medicines" have survived till today because the British were unable to develop and impose their own medicine due to lack of means and resistance from indigenous people and migrants (Chinese, Indians). However, he opines that, compared to Chinese medicine also introduced through migration, the success of Indian medicines was undermined by several factors: compartmentalisation of the community related to the caste system, ¹⁴ dispersal of Indian workers in plantations, and the absolute control of the British over them. In contrast, the large size of the Chinese community, the close ties it maintained with the motherland, and the ability of its practitioners to organise their medicine, including importation of remedies from China and establishment of associations, are as much factors that have favoured the development of their medicine till today.

The dissertation by Parvathy Vegadasalam (1998/1999) does not question when and how TIMs were introduced into Singapore. However, in her thesis, Vineeta Sinha (1996) presents two pieces of evidence about Indian medical practice in British Malaya she found in the literature. Her first mention comes from a naturalist traveller, F.W. Burbidge, who wrote in 1880: "In many Chinese and Kling [= Indian] shops European tinned provisions and patent medicines may be obtained at a very slight advance on home prices, as these petty traders watch the sales of old ships' stores very closely, and thus enabled to purchase very cheaply." (ibid.: 111; Burbidge 1880: 22). This quotation indicates that, at this period, Indians sold imported medicinal products, but the author does not specify what sorts of patent medicine these were (siddha? ayurveda?), from which places they came, or who were these retailers (practitioners? grocers? pharmacists?). The second mention, in contrast, specifies the type of medicine. It concerns an advertisement for the opening of the Lanka Ayurvedic Medical Hall in Kuala Lumpur from the Malayan Medical Journal dated 6 July 1927. Vineeta Sinha opines that this advertisement, as well as information she collected from a practitioner who claimed that his uncle had opened an ayurvedic shop in 1925 on the Singapore island, "strongly support the possibility of individuals with knowledge of traditional healing practices in the past." (Sinha ibid.: 120). These two references testify that TIMs -ayurveda, at least- were available in the major towns at the beginning of the 20th century. One wonders whether the statement by Frederick C. Colley (1978: 85): "For the most part Indian medicine has been confined to rural estates and small towns in the past" does not refer to siddha medicine as Tamil workers mostly lived in rural zone.

Vineeta Sinha argues that, in comparison to Chinese and Malay medicines, "practically nothing is published about Indian systems of medicine in colonial Malaya." (*ibid*.:120). An investigation of the TIM practitioners as well as of the colonial archives in Malaysia would be pertinent to comprehend how each of the pan-Indian medicines have been developed. Indeed, the

¹⁴ The first point is nonetheless debatable as the socio-economic profile of migrants was mostly limited to lower and intermediate castes. The caste of Chettiar or Nagarathar constitutes an exception as its members, largely appreciated and supported by the British for their educational, entrepreneurial and financial skills, emigrated to British Malaya to develop business and banking (money lending; remittance agents) (Suppiah 2016; Tate 2008; Thinnappan and Vairavan 2010).

owner of Ganeis Herbal (also named Ayurbumi) clinic I visited in Johor Bahru, claims to represent the 5th generation of siddha practitioners in Malaysia. 15 In addition, search on the Internet has revealed a significant number of siddha clinics (30), half of them (16) being established in Selangor, a Malay state composed of 12.1% of Indians, mostly Tamils, the greater part of whom migrated in the 19th century to work in tin mining.

Siddha and ayurveda in contemporary Singapore

Siddha medicines and remedies: heterogeneous practices

Focusing primarily on the practice of siddha medicine in Singapore, my first visit to TIM clinics was devoted to Siddha Maruthuva & Ayurvedic whose address I got from the Internet. 16 Well situated in Little India, this old clinic is, surprisingly, not well known to the Tamil people I interacted with. It is identified by two signboards, one facing each street, on which is written in English and Tamil "Siddha Maruthuva & Ayurvedic - Traditional Herbal Treatment", and another, more understated, on which "siddha maruthuva gurukulam - siddha ayurvedic herbal centre- Traditional Herbal Indian Foods" is written in the two languages as well. Two old and torn advertisements are posted on the clinic window: one in Tamil, English and Malay for a hair oil to prevent hair loss and early whitening and to improve growth; and the other in Tamil, English, Malay and Mandarin, for a bath powder to prevent skin allergies and bad odour, beautify the skin and hair and improve sleep. The front of the clinic is decorated with pots containing ornamental plants and three medicinal plants emblematic of siddha materia medica for their multiple proprieties: piranțai (Vitis quatrangularis); kumari (Aloe vera); kīlānelli (*Phyllantus niruri*). When I entered the clinic, I was received by Mr Sivanathan, ¹⁷ a sixty to sixty-five year old Tamil man, not very forthcoming, and becoming a little suspicious when I explained the purpose of my visit. Nevertheless, his information was particularly relevant to approaching the regulation of traditional remedies in Singapore and the means used to circumvent the law in order to treat patients whose health condition requires specific treatment.

 $^{^{15}}$ This claim is also mentioned on his website: http://www.ayurbumi.com/about.php 16 www.siddhayurvic.com

¹⁷ To preserve anonymity, I have used a pseudonym.



Siddha Maruthuva & Ayurvedic ©Christian Sebastia

Sivanathan, employed at the clinic by Mrs Shila Kaur, has no siddha degree. He is a paramparaiya vaittiyar, 18 a medical practitioner who acquires knowledge in the traditional way. He explained that he learnt siddha from his family, and especially from his guru, forty years ago. A great yogi, according to Sivanathan, his guru lived at Pollachi (Tamil Nadu) and taught him how to acquire siddha knowledge through meditation. Photos of the guru and Sivanathan, both in yogic position, are exposed in front of the consultation desk, near a Pōkar picture. 19 When Sivanathan learnt siddha knowledge, he was involved in business in Singapore, and left his job to practise at the Shila clinic, twenty-five years ago. I was not able to learn more about his encounter with Shila and he suggested I meet her for additional information. However, he manifested a keen interest in showing his medicinal products, labelled with the name of the clinic and well displayed on the shelves in the consultation room. Most of them are simple drugs, easy to prepare, such as *curanam* (mono and poly medicinal plants dried and powdered) and *kaṣayam* (decoction), but there are also a few parpam, alkaline products elaborated with herbs and minerals (āmai yōtu 'tortoise shells'; canku' conch shell'; cilācattu 'gypsum') which must go through a long process of soaking, drying, grinding and incinerating. While he introduced his remedies to me, he confided:

"In Singapore, we cannot give medicine with metals, they are forbidden. But when patient condition needs, I call my guru's son. He prepares the medicine and sends to me by post."

Such a confidence surprised me as I had not brought up the issue of metal in remedies when I examined the ingredients listed on the label of his medicinal products. Siddha practitioners, especially those traditionally trained, attribute a greater efficacy to their medicine than to those of ayurveda, because they have recourse to herbometallic remedies when plant-based drugs are ineffective or a serious disease is too far gone. They insist, however, that to avoid risk of toxicity they shorten the duration of treatment as much as possible. Ayurveda is not

¹⁸ In this context, *paramparai* means "Hereditary succession proceeding from father to son, from guru to disciple, from generation to generation", Tamil Lexicon, Madras University (1982), p.2499. *Vaittiyar* (in Tamil) means traditional medical practitioner.

¹⁹ Pōkar is one of the *cittar* the most venerated by practitioners as he is accredited with many texts on alchemy, iatrochemistry and magic.

reputed for having herbometallic drugs in its pharmacopeia and, even when present, they are not publicised, as shown by AYUSH website in its respective definitions of ayurveda and siddha treatments:

"The treatment approach in the Ayurveda system is holistic and individualized having preventive, curative, mitigative, recuperative and rehabilitative aspects. The principal objectives of Ayurveda are maintenance and promotion of health, prevention of disease and cure of sickness.

Treatment of the disease consists in avoiding causative factors responsible for disequilibrium of the body matrix or of any of its constituent parts through the use of Panchakarma procedures, medicines, suitable diet, activity and regimen for restoring the balance and strengthening the body mechanisms to prevent or minimize re-occurrence of the disease."²⁰

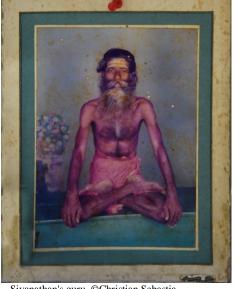
"The Siddha Medicines which contains mercury, silver, arsenic, lead and sulphur have been found to be effective in treating certain infectious diseases including venereal diseases. Practitioners have claimed that Siddha medicines are effective in reducing the highly debilitating problems that manifest themselves among patients of HIV/AIDS."²¹

These institutional definitions reveal a deep dichotomy opposing siddha therapy as curative to ayurveda therapy as oriented towards prevention, purification and rejuvenation. In practice, the differences are much more tenuous, as purification and prevention principles are also substantial in siddha medicine (drugs, dietary rules, hygiene), and rejuvenation called *karpam*, is a fundamental concept of the siddha tradition, crossing medicine/pharmacy, alchemy, yoga and spirituality. Although AYUSH also attributes great efficiency to siddha medicines because of their metallic components, they are regarded with suspicion because of their possible toxicity. Severe intoxications, and even death, of patients treated by non-institutional siddha practitioners, generally categorised as 'quacks', are regularly reported in the Indian media. In contrast, ayurveda treatment is rarely in the spotlight, even though its remedies are not free from metallic components, at least in India (Sebastia [2016]2018). Reflecting the image ayurveda has acquired abroad, AYUSH supports its holistic, softness and nature values. But as we will see later, these values may have an ambivalent impact on ayurvedic practice: they serve to attract clients but threaten the integrity of the practitioners' medical mission.

²¹ http://ayush.gov.in/about-the-systems/siddha/diagnosis-and-treatment Consulted on 15.06.2019

²⁰ http://ayush.gov.in/about-the-systems/ayurveda/treatment Consulted on 15.06.2019







Sivanathan as a yogi ©Christian Sebastia

Sivanathan's guru ©Christian Sebastia

Picture of Akattiyar ©Christian Sebastia

Compared to Sivanathan, Mrs Shila Kaur was reticent about giving information on her clinic and often asked me to consult her website. She claims to have founded her clinic 25 years ago, i.e. in 1994 (that would correspond to the employment of Mr Sivanathan). Parvathy Vagadasalam in her dissertation (1998/1999: 147), on the other hand, mentions that this clinic was founded in 1993 by Sockalingam.²² She specifies: "[Sockalingam] is confident that his sister-in-law (Mrs Sheela Kaur) who is presently helping him with her husband, would continue his business once he is not around." When I mentioned Sockalingam, Shila forcefully denied knowing him and I was unable to get more information regarding the clinic's history and its founder. According to Parvathy Vagadasalam, Sockalingam was warned by the Ministry of Health, Singapore, about his supply of medicaments to treat diabetes and cancer. She adds: "However, he still treats some cases in Kuala Lumpur, Malaysia, where he has another clinic (in Sungai Wang Plaza)" (*ibid*.: 146). Shila is a Punjabi, born in Malaysia where her family has been established for several generations. She married a Tamil who taught her siddha medicine. Like Sockalingam and Sivanathan, Shila has no siddha degree. She has, however, numerous diplomas and course certificates displayed on the walls of the consultation room, a practice very common in the non-institutional siddha milieu in India for legitimating practices (Sebastia 2012). Shila's diplomas and certificates are for a variety of learning courses organised by Indian, UK, US, Chinese and Singaporean agencies in Siddha medical sciences, Homeopathy, Alternative Medicine, Bach flower remedies, Traditional Massotherapy, Chinese Acupressure Baby Massage, Post Natal Massage and Foot Reflexology, Diet & Nutrition for Complementary Therapists and Diploma in Indian Head Massage, as well as a course certificate from the Madurai Siddha Vaittiyar Sangham, well known in the siddha milieu (Sebastia 2010). None of these is recognised by AYUSH as a qualification to practise siddha in India and they are consequently invalid in Singapore where, in the absence of siddha schools, Indian degrees are compulsory. Mr Sivanathan has only two diplomas displayed in a small room where he was filling capsules with herbal powder when I was interviewing Shila. One is for alternative

²² Vineetha Sinha (1995) does not mention this clinic, perhaps because it was too new when she conducted her fieldwork.

medicine from the Open University of Sri Lanka and the other is from the Madurai Siddha Vaittiyar Sangham. Though Shila learnt siddha medicine from her husband and from Mr Sockalingam, as mentioned by Parvathy Vagadasalam, she appointed Sivanathan specifically to look after the clinic. Preferring to practise the specialties of Malay medicine she learnt from her mother, which consist of caring for newborn babies and their mothers with massages and simple remedies, she comes to the siddha clinic only once a week for a few hours.

Compared to this clinic whose discreet board 'siddha maruthuva gurukulam pte ldt' emphasises its anchorage in the tradition, the recent clinic, Siddha Medicare & Ayush Herbal, established in January 2019, reflects the modernisation of siddha medical practice (Wujastik and Smith 2018²³). Indeed, gurukulam refers to an education system by which a disciple resides with his/her master (guru) for several years during which he/she progressively learns his/her knowledge, including his/her way of life. By extension, the term is applied to the acquisition of knowledge from a family member or a master chosen by the disciple for his/her skills, as in the case of Sivanathan who learnt from both his father and a guru. In contrast, the clinic Siddha Medicare & Ayush Herbal was established by six women doctors²⁴ who became acquainted through their husbands. They have the BSMS degree, awarded by a siddha college in Tamil Nadu (Palayamkottai Siddha college; Anna Hospital, Chennai), or in Sri Lanka. Three of them had already created a clinic in 2010 and closed it in 2012 when they had their first children. Encouraged by the ayurvedic association APAS (Ayurvedic Practitioners Association of Singapore), they founded the Siddha Practitioners Association of Singapore, SiddhaPAS, and then opened the clinic in a rented office. Modernity is also taking place in the clinical practice modelled on that of biomedicine. Admittedly, the poster in front of the clinic displays many basic features of the siddha tradition: evocations to *cittarkal* (picture of Pōkar, 25 dietary rules of Tēraivar, properties of siddha medicine by Tirumūlar); representation of the vogic body with 7 cakras; mention of the 5 constituents (aimpūtankaļ) and the 8 diagnostic methods with an emphasis on pulse reading based on the three nāṭi (vātam-pittam-kapam translated as 'wind-bilephlegm'); a picture illustrating acupressure (varma) and vogic gestures (muttirai; from Sanskrit, mudra);²⁶ and several on materia medica. However, as in India, it is the sphygmomanometer which replaces pulse reading as this diagnostic technique is poorly taught in colleges. The presence of this instrument as well as of a stethoscope, both prominently displayed on the consultation desk, entails a certain confusion with biomedical practice.²⁷ Remedies are not handmade, but manufactured and imported from India, notably from Himalaya, a well known ayurveda pharmaceutical company. Unlike Sivanathan, the six siddha doctors refrain from providing any herbometallic products even if the patient's condition necessitates it. As illustrated on the poster, the pictures of materia medica, entitled Natural Herbal Remedies, depict only vegetal-origin products. The exclusion of metal and mineral representations that characterise siddha medicine is in compliance with the Singaporean regulations on poisons (Poisons Act

²³ See below, the distinction between *modern* and *global* proposed by these authors for ayurveda practice.

²⁴ I will use the term doctor for institutional practitioners, as they define themselves.

²⁵ Pōkar is a *cittar* particularly venerated in the siddha milieu for his anchorage in alchemy.

²⁶ This combination is surprising, as they are not used in association: *varma* is an external therapy and *muttirai* are gestures used in yoga.

²⁷ These instruments are also used by some non-institutional practitioners in India. Many of them said that they give

²⁷ These instruments are also used by some non-institutional practitioners in India. Many of them said that they give confidence to patients. As patients are increasingly exposed to biomedical tools, they also ask for them to be used. At Siddha Maruthuva & Ayurvedic, these instruments are not displayed on the practitioner's desk. This reinforces the firm alignment of the medical practice of Sivanathan and Shila with the tradition.

1957). Medicines provided in this clinic are, nonetheless, limited in variety. One of the doctors justifies this by the rigid rules regulating importation of remedies: for obtaining authorisation to import each product, a document providing information on the pharmaceutical company (address, GMP²⁸ and ISO certifications), list of ingredients, and medical uses, has to be sent to the Health Science Authority (HSA). Given that ayurveda clinics in Singapore regularly import drugs from India, obtaining authorisation to sell ayuvedic medicines is easier than siddha ones with which the HSA is less familiar. Patients may, nonetheless, complete their treatment by buying medicines in India, directly or through acquaintances (practice evocatively called "suitcase medicines"), or from some groceries and the pharmacy specialising in ayurveda, siddha and unani medicines, located in Little India.



Siddha Medicare and Ayush Herbal ©Christian Sebastia



Poster of Siddha Medicare and Ayush Herbal ©Christian Sebastia

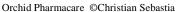
This pharmacy existed when Parvathy Vagadasalam conducted her fieldwork. Named Orchid Pharmacare, it was located in a rented building in the area where it is today, close to the heritage building of Tan Teng Niah on Kerbau Road. Three main signboards, with diverse names for attracting a large variety of clients, are displayed in its front: 1/ Medical & Health Shop (siddha and planet ayurveda) & unani, Orchid pharmacare & herbal care; 2/ SAI Planet ayurveda herbal boutique, Holistic healing through herbs; and 3/ Maruntakam (Nāṭṭu Maruntu) meaning Pharmacy (Country Medicines). It is well known to Tamil people. The pharmacist, a Tamil woman, was reluctant to be interviewed and made me feel that I should not stay too long. I came back from time to time, but without finding out about the types of drugs she sells, the

²⁸ Good Manufacturing Practice

²⁹ I found a photo in which the pharmacy occupied a part of Tan Teng Niah's residence in its previous state.

pharmaceutical companies they come from, nor the process she is following to procure them. I could, nonetheless, identify remedies from two siddha companies: Annai Aravindh Herbals and Agasthiyar Herbal Products³⁰ whose packets of diverse *curanam* (powder of dried medicinal plant(s)) are displayed in front the pharmacy.







Lavender Multimart ©Christian Sebastia

Five or six Tamil groceries located in Little India sold medicinal herbal products:³¹ *curaṇam*, in raw or capsule form,³² decoctions and external oils. Sri Lavender Multimart, and Jothi stores (est.1962) are those that supply the greatest variety of brands of siddha (Allwin,³³ R.R Herbals, Annai Aravindh Herbals, SKM) and ayurvedic remedies (Himalaya, Dr Kumar's, Patanjali), and also some Chinese medicines, herbal and natural products (Killy, Nature's wellness, Svadeshi), dietary supplements and cosmetics.

A small grocery attracted my attention by the amount of space it devotes to medicinal plants, packed and raw, as well as to material for performing religious rituals (homam, $p\bar{u}ja$). It resembles a $n\bar{a}ttu$ maruntu katai, shop of country medicines, in which many raw plants (dried and fresh) are sold for medicinal and/or religious purposes. This grocery, located at Mekka Centre, belongs to a Tamil Muslim family. According to Shah, ³⁴ who has been running the shop with his mother since his father died, it was established by his grandfather in 1962. At that time, he worked as a translator for the British government, and opened the shop to supply spices to Tamil families. Shah's father, who resided at Nagore (near Nagapattinam, Tamil Nadu), with his mother, joined his father in Singapore in the 1970s. He developed the shop by selling fresh and dried herbs, first for cooking and then for medicinal use. The novelty Shah has brought to the shop is the supply of organic and traditional food products such as varieties of millets and sugar

³⁰ Agattiyar is the most emblematic *cittar* as he is considered the father of the Tamil language and of siddha medicine.

³¹ In contrast to Parvathi Vagadasalam, I distinguish medicinal herbal products from spices and vegetables as the latter are available in all groceries and are not specifically used for treating diseases.

³² Capsules are increasingly used in ayurveda and siddha as patients are become reluctant to take *curanam* because of the bitterness of plants.

³³ There is no location of this brand inscribed on packets, but only the name of Sri Lavender Multimart. This suggests that the powders are imported and packed by the store. The plants are named in the Tamil language and written in both Arabic and Tamil characters. A marketing website Herbal Links is managed by this store.

³⁴ To preserve anonymity of the informant, I have used a pseudonym.

palm, products increasingly recommended in India to fight malnutrition-related diseases (metabolic disorders; deficiencies in micronutriments). The siddha remedies of this shop consist in a large variety of *curanam* from R.R Herbals and of dried plants, that a relative in Chennai, a siddha practitioner, sends by post in order to avoid customs problems and delays. Shah's mother who has worked with her husband since 1970s, puts her medical knowledge to the benefit of clients. But when a patient's condition requires it, Shah calls his relative for advice and appropriate remedies, some of them might be prohibited by the Poisons Act,1957, due to their components (metal, mineral, plants).

Shah heard about the Siddha Maruthuva & Ayurvedic clinic but he never visited it. When he was young, his father took him to a traditional siddha practitioner (non-institutional) who resided behind Srinivasa Perumal Temple. This practitioner was also mentioned to me when I talked with some Tamils about the medical sources they resorted to in the past. At the Darma Muneeshwaran temple, a trustee member, Mr Mathivaran, told me that he knew a siddha practitioner. I was directed to this temple, situated in Seerangoon North, by a priest of the Sri Thendayuthapani temple who informed me that consultations of siddha medicine were provided, information which proved to be wrong as the consultations, today discontinued, concerned homeopathy. Mr Mathivaran, a very helpful person, took me to the practitioner's residence but he was absent. In her thesis, Vineetha Sinha (1995) mentions two aspects of siddha practice she met with twenty years ago. The first concerns a non-institutional practitioner: "I was directed by some family members to a 65-year old retired male school principal with a reputation for being a 'Siddha Vaidya expert'. I was told that he was acquainted with the theory and philosophy of this therapy although he lacked any formal training." (ibid.: 223). The second evokes the circulation of siddha practitioners from India: "The practice of 'Siddha Vaidya' has no institutional locus in Singapore and those who turn to this treatment rely primarily on foreign 'experts' who occasionally visit Singapore, or often in other countries such as Malaysia, Sri Lanka and India." (ibid.: 217-218). She states: "I did not meet such 'foreign 'experts'" during my stay, but one can think that they have not disappeared." From my knowledge of the siddha milieu in India, I observed how some practitioners are prone to visit countries hosting a significant Tamil community in order to promote siddha medicine through seminars, consultations and yoga sessions, Malaysia and Singapore being often mentioned as well as European and Gulf countries.



Display racks of Siddha remedies, herbals and articles for rituals at Shah's shop @Christian Sebastia

Ayurveda clinics in Singapour: a homogeneous practice modeled on Kerala ayurveda

Compared to the diversity of siddha practices in Singapore -similar to India-, the practice of ayurveda is more homogenous from the point of view of the professional profile of its practitioners and therapeutic treatment. All the clinic owners have a degree from India, mostly BAMS (Bachelor of Ayurvedic medicine and Surgery), except Mahesh Appu who runs the oldest ayurveda clinic established in Singapore, and Shailu, the owner of Om Vedic Heritage Centre, but both employ BAMS doctors for examining and treating patients. Vaneetha Sinha and Parvathy Vagadasalam refer to Mahesh Appu's father, M.A.K. Appu Vaidyar, ³⁵ as the unique ayurvedic practitioner in Singapore. Vaneetha Sinha states (*ibid.*: 217):

"To my knowledge, there is one professional practitioner of ayurvedic medicine in Singapore today. His practice was established by his family in the early 1900s, and continues to attract a reasonably large following."

According to Mahesh Appu, the first clinic was established by his father's uncle, Shri Govindan Vaidyar, in 1932. He requested his nephew to come to Singapore, and in 1941, Appu Vaidyar began apprenticeship under his guidance (*gurukulam* education). After his uncle's retirement in 1947, Appu Vaidyar established his own clinic that he named Malayala Ayurveda Vaidyasala. Dying in 2009, he was survived by his wife, Leela Appu and Mahesh Appu (trained by Appu Vaidyar) who are running the clinic today. This clinic is now located in Serangoon road opposite the Srinivasa Perumal temple. When Parvathy Vagadasalam conducted her study, it was Appu Vaidyar who treated patients, but now consultations are conducted by a BAMS doctor recruited from Kerala in order to comply with Singapore laws. Appu Vaidyar has abandoned his practice and spends a large part of his time at the clinic where he serves as advisor to his employees, the BAMS doctor and therapists.

At Malayala Ayurveda Vaidyasala, as in the ayuvedic clinics I visited in Singapore, patients are provided with manufactured medicines. Mahesh relates that, when he was young, he prepared with his father a few drugs from Govindan Vaidyar's formulas (family medicines). The decline of availability of raw materials in provision shops in Little India had forced Govindan Vaidyar to reduce his production. From the 1950s, he began to import some medicines from Arya Vaidya Sala, a long-term manufacture situated at Kottakal, Kerala, particularly renowned for its founder, S.P. Varier, promoter of Kerala-type ayurveda. These ready-made medicines had completely replaced the hand-made ones when Appu Vaidyar stopped his production in 1970s. Medicaments from Arya Vaidya Sala are, along with those from Arya Vaidya Pharmacy (AVP), the most frequently provided in ayurveda clinics in Singapore. This later manufacture was established in 1941 in Coimbatore, Tamil Nadu, by a disciple of S.P. Varier, P.V. Rama Varier, who studied at his school (*patasala*). 36

³⁶ S.P Varier is well known for his efforts to revitalise ayurveda and increase its repute. He created an ayurvedic pharmaceutical company to produce and standardise remedies on scientific and modern lines with the production of western drugs. He also established a school to modernise the education of practitioners and standardise ayurvedic knowledge. Unlike those of his North Indian peers, his initiatives to revive ayurveda and compete with British medicine were supported by the local rulers of Travancore, Cochin and Calicut and influential families of the region

(Bode 2008; Harilal 2008).

³⁵ Vaidyar (Malayalam) or vaittyar (Tamil) or vaidya (Hindi) is used by non-institutional practitioners of pan-Indian medicines (siddha and ayurveda) as a title added to their names.



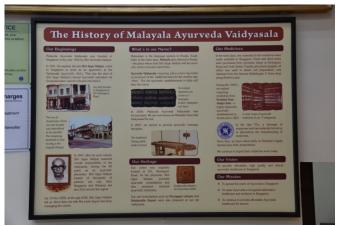
Malayala Ayurveda Vaidyasala ©Christian Sebastia



Appu Vaidyar ©Christian Sebastia



Malayala Ayurveda Sala: exhibiting medical heritage ©Christian Sebastia



Malayala Ayurveda Sala: exhibiting medical heritage ©Christian Sebastia

The Kerala signature of ayurvedic medicaments mostly provided in Singapore is corroborated by the medical practice of the eight clinics I visited. Often established in rented premises, ayurveda clinics began emerging from the early 2000s, as also confirmed by Vaneetha Sinha and Parvathy Vagadasalam who mention only the ayurvedic clinic of Appu Vaidyar. Most of the clinics were founded by Indian ayurvedic doctors who expected to do business thanks to the worldwide popularity of ayurveda. Although the number of ayurveda clinics has rapidly increased in these last years, their activity greatly varies: some have a significant clientele composed of Indians, and also of Malays, Chinese and Westerners, while others are little frequented, or even no longer exist.³⁷ According to the association APAS, there are 35 ayurvedic practitioners in Singapore, among them a third are running a clinic or several (2 to 4), and the

³⁷ Among the ayurvedic clinics I identified on the Internet, two were permanently closed.

rest are hired either to manage the clinic³⁸ or to assist the owner when the clinic is busy. From fieldwork and the list of Case Trust Accreditation,³⁹ I have identified 16 clinics mostly localised in Little India; those situated in another district of Singapore are quite often branches of an initial clinic established in Little India. Two ayurveda clinic owners, the president and the vice-president of APAS, also have a clinic in Johor Bahru, Malaysia.

The majority of clinic owners received their BAMS degree from ayurvedic colleges in Kerala, or worked in Kerala or in Kerala ayurveda-linked hospitals (AVP, Coimbatore; AVN, Madurai). The director of Ayush Ayurvedic clinic (vice president of APAS), for example, 40 acquired his BAMS degree in Coimbatore (Tamil Nadu), but improved his clinical practice beside a Malayali guru, Valiya Narayanan Namboothiri. 41 These clinics, in addition, employ therapists, and sometimes, ayurvedic doctors from Kerala. On the other hand, all the clinics offer Kerala-influenced treatment, i.e. strictly herbal remedies and what I would call 'gentle pañcakarma therapies' - with reference to Francis Zimmerman (1992). This author has indeed showed that, to oppose British medicine deemed harmful because of its iatrogenic effects, ayurveda was transformed in such a way as to "offer an alternative to the hardness of biomedicine" (*ibid*.: 209). All purifying therapies and medications causing violent evacuations (emetics, carminatives, laxatives, etc) were abandoned and replaced by more gentle and comfortable therapies, notably oil/plant-based therapies such as śirodhara, massages, imbrocations and sweating, or to quote Francis Zimmerman, therapies "[n]ever red (the red of bloodletting); nor black (the black of chemical oxides), but green - the green herbs freshly gathered, a symbol of nonviolence" (ibid.: 210). The transformation of ayurveda into gentle medicine has been of benefit to its export, first to America when Maharishi Mahesh Yogi was the prime promoter, and then to the world. Pictures of śirodhara, representing a patient comfortably lying on a wooden table, the forehead under a trickle of medicated oil slowly flowing from a shining cup, and of bodies being gently massaged with medicated pouches are displayed as symbols of the *pañcakarma* therapies of ayurveda.

These representations of soothing and pleasant therapies are extensively used to attract clientele all over the world but, in Singapore, they have some consequences for the medical practice. When questioned on the differences in practice between India and Singapore, all ayurvedic doctors complain about the difficulties of being considered as a 'doctor':

"In India, patients know ayurveda, they used to visit us. But here, they don't know, they come to us and request directly for massages. We have to explain that, in ayurveda, we cannot give massages. We need to examine them first, and according to their condition, we select the type of massage or the appropriate therapy."

Interviewer:

"When you propose consultation, do clients accept?"

-

³⁸ In several ayurvedic clinics, I could not meet the owner. According to the staff, he/she had returned to India for several months. This confirms the entrepreneurial objective of some owners who have recruited an ayurvedic doctor from Kerala to manage their clinic in Singapore.

³⁹ https://app.case.org.sg/casetrust.plx?rm=resultsSpa1 (and Spa2) Consulted on 19.06.2019

⁴⁰ See his profile on http://ayurvedasg.com/about-us

⁴¹ Namboothiri is a caste name of Brahmins versed in *Aṣṭāṅga Hṛidaya*, one of the ayurvedic treatises (8th century) which describes the eight branches of ayurveda (*aṣṭāṅga*).

Ayurvedic doctors:

"Not always. We have to justify again why it is necessary to examine them before. This is the main problem we meet here in Singapore, even with Indians, as many of them have never been to India."

This complaint takes on its full meaning when we consider the business environment by which ayurveda clinics are surrounded. In Singapore, and in particular in Little India, there are numerous Thai, Malay and Chinese wellness centres and SPAs clearly identified by pictures of massage covering the front window, ⁴² and also a few Indian beauty parlors that use ayurvedaderived names on their signboards. Therefore, not only do ayurvedic doctors have to compete with these centres, but they must also stand out as medical experts. This confusion, originating in massage therapy offers them the opportunity to attract clients -a significant difference from siddha practitioners-, but it is at the price of discrediting their profession. Interestingly, when I questioned the owners of the Kerala Ayurveda Centre about the reason its front window was free of symbolic pictures of ayurveda therapies, they smilingly argued:

"You have noticed it! Yes, when we reestablished our clinic at this new place, we decided to have a front window free of pictures of massages, *śirodhara*, herbs. We find this solution so as patients know that we are a medical clinic. Ayurveda is still not well known in Singapore and it needs to be valorised as a true medical system."

The Singapore context does not favour the curative aspect of ayurveda as its therapies are included in a set of techniques the request of clients for which is not clearly related to medical objectives. The registration process to establish a clinic and to practise ayurveda in Singapore accentuates this gap. Owners must register their clinic with the Health Science Authority (HSA), under the category "Traditional medicines, medicated oils and balms". This registration, which is compulsory for both ayurveda and siddha, ⁴³ allow the provision of medicines regulated under the Health Products Act 2007. As their therapeutic system includes massage, ayurveda clinic owners have to submit two applications: one to get "The Case Trust of Accreditation for SPA and Wellness Business" delivered by the Consumers Association of Singapore and, once this is obtained, another to have the form "Massage Establishment Act (chapter 173) Massage Establishment Rules" delivered by the Police Licensing Division. ⁴⁴ Such documents that have to be displayed at the entrance of ayurveda clinics obviously conceal their actual medical capacity, which is also minimized by their being prohibited to diffuse advertisements and claims for their ability to treat serious diseases.

⁴² No fewer than 717 SPAs and wellness centres are registered under Case Trust of Accredition for SPA and Wellness Business. https://app.case.org.sg/casetrust.plx?rm=resultsSpa1 (and Spa2) Consulted on 19.03.2019

⁴³ As the subject was sensitive, I did not ask Shila about registration of her siddha clinic. She told me, however, that she is not registered with APAS or SiddhaPAS.

⁴⁴ https://www.casetrust.org.sg/Upload/download/pdf/Info%20Kit%20-%20Spa%20&%20Wellness.pdf The Siddha Medicare clinic's doctors do not need these documents as they do not practise massage.



One of the ayurvedic centres promoting *pañcakarma* therapies ©Christian Sebastia



The ayurvedic centre which does not promote pañcakarma to avoid confusion ©Christian Sebastia



Indian beauty parlour ©Christian Sebastia



Practising ayurveda among multiple of wellness centres ©Christian Sebastia

Articles on the use of complementary and alternative medicines (CAM for Singapore) and of traditional and complementary (T/CM for Malaysia) in which TIMs are included, point out that they are sought especially for common ailments, disease prevention and wellness (Ang and Wilkinson 2013; Lim et al. 2005). The survey by Ang and Wilkinson (2013: 45), for example, reports, "the most common conditions clients came to see them [practitioners of CAM] were fatigue and lethargy (52%), musculoskeletal conditions (45%), chronic pain (41%), migraines and headaches (41%), and stress and anxiety (41%). More serious medical conditions such as arthritis (19%), cancer(19%), diabetes (10%), and heart disease (5%) were less frequently seen by the participants." However, in this survey, the practitioners' responses are not differentiated according to the CAM they are practising. The ayurvedic practitioners and doctors with whom I spoke, state that the health conditions for which they are approached vary from mild ailments, such as headache and joint pain, to lifestyle diseases (obesity and diabetes), and even to cancer. One doctor explains:

"We are approached by all ethnic people. Two thirds of our patients are Indians, then Malays, a few Chinese and white people come also. Many come for massages, but when we question them, they say that they have back pain or diabetes, or they want to lose weight. Some consult also for

cancer, they come with their medical report from allopathy. 45 But in Singapore, we are not allowed to treat severe diseases and thus we request them to continue with allopathic doctors. We give them some medicines to boost their immunity and detoxify their body. We can also give some massages. This is the problem in Singapore, we are not allowed to treat diseases; just we can give some food complements."

They insist that when they are consulted by Indian women, it is mostly for complaints about stress and sleeping difficulties.

"In Indian community in Singapore, a lot of responsibility is on women. They have to work and also to manage the house, children, education, etc. A lot of work. They cannot have a maid, it is too expensive. In India, women have less need to work, and if they work, parents or family members may assist them. So, here, they began to lose their sleep, have stress, and become depressed."

It should be emphasised that in India too, ayurved atherapies are not always chosen for their ability to treat diseases. This is particularly true in Kerala where ayurved acentres, regulated by the Ministry of Tourism, are increasingly frequented by Indians from the middle and upper classes in quest of relaxing therapies to remove tension caused by hard work and a stressful environment. However, ayurvedic doctors in Singapore are making efforts to publicise their medicine and to obtain recognition from the Ministry of Health.

Indian Medicines associations in Singapore: attempts to model TCM status and Malay policy for T/CM

TIMs are not recognised in Singapore, unlike traditional Chinese medicine (TCM), which was integrated into the public health policy of the Ministry of Health in 2000, and unlike in Malaysia where they are included in traditional and complementary medicines (T/CM) and some of their therapies are provided in a few hospitals. This chapter will discuss the actions developed by TIM doctors with the goal of obtaining recognition for their medicines, which are inspired, on the one hand, by the role of associations in organising and promoting TCM and, on the other, by the integrative policy of the Malay Ministry of Health regarding traditional medicines.

Compared to TCM, TIMs are much less developed in Singapore and most of the clinics opened recently. The obvious reason is the size of each community: in 2017, Chinese represented 74.3% of residents (citizens and permanent residents) and Indians only 9.0%, 46 and consequently, there is an over-representation of TCM practitioners (3109) compared to TIM practitioners (42).⁴⁷ Other reasons are related to the identity and behaviour of Chinese and Indians. Giok Ling Ooi (1991), in his paper on ethnic medicine in British Malaya, shows that Chinese practitioners were particularly efficient in organising their own medicine and ensuring its propagation by founding medical and pharmaceutical associations and schools. He insists on the philanthropic engagement of the Chinese in creating medical facilities for their community care (*ibid*.: 168):

⁴⁵ Allopathy is the term -inappropriate- commonly used in India for biomedicine, as opposed to traditional medicine. ⁴⁶ https://www.singstat.gov.sg/-/media/files/publications/reference/sif2018.pdf

⁴⁷ It is worth mentioning that proportionally to the population, there are more TIM practitioners than TCM ones. This seems to be related to the recent increase of ayurvedic clinics.

"Wealthy Chinese merchants, especially those given the office of *Kapitan Cina* by the colonial government and recognised as the leaders of the Chinese community, built Western-style hospitals⁴⁸ for paupers and lepers and also established maternity services in the major Straits Settlements towns. Simultaneously, hospitals operating free clinics and offering classical Chinese medical care were also organised."

The Chinese also set up a medical school to train Chinese medical practitioners whose emigration from China was limited during the period following the Second World War. Compared to the Chinese, Indians did not attempt to organise their own medicine. Giok Ling Ooi justifies this lack of involvement by the geographic dispersion of the Indian community across the Malaya territory, the absolute control of planters over the community and its deep fractionalization according to social identity (caste, religion, activity: labourers, merchants, convicts). He states:

" (...) towards the end of colonial rule, even consumer support for Malay and Indian ethnic medical services appeared to be on the wane. Village chiefs had started to ask for Western-style health care delivery. Consumption of ethnic Indian medicine remained restricted to Tamil and small urban communities. It failed to expand before the incorporation of ethnic Indians into the Western medical sector, as both profession and paramedical workers."

It must be added that Indians had already partially adopted British medicine in India, at least in urban areas, as traditional medicines were waning due to lack of support from the Raj which considered indigenous medical knowledge as inferior, laughable, and hardly compatible with their own medicine, as well as lack of cooperation amongst practitioners in adapting their medicinal systems to the British medical model in terms of education and clinical and pharmaceutical practices (Arnold 1993; Bala 2012; Kumar and Basu 2013; Panikkar 1992). This context favoured the migration of Indians trained in British medicine to Malaya to compensate for the shortage of Chinese and Malay staff (Ooi *ibid.*)⁴⁹ In addition, the ethnic diversity of Indians related to their native place in India and, concomitantly, differences in languages and cultural practices did not favour a spirit of solidarity.

Regarding associations which were fundamental for Chinese in the organisation and development of their medicines, Giok Ling Ooi indicates that they were 24 in 1976, while TIM was represented by only one, "created in 1978 in Malaisya" (*ibid*.: 174). He does not provide any details about this association, but the article by Frederick C. Colley (1978: 85) states:

In 1972 the Homeo-Ayurveda-Siddha Physician's Association (HASPA) was founded by full time Indian medicine practitioners in Kuala Lumpur. Present time the HASPA has a membership of approximately 100 throughout Malaysia, mostly urban practitioners.

HASPA no longer exists, but the creation of the Traditional and Complementary Medicine Unit under the Family Health Development Division in Malaysia led, in 1999, to the formation of five associations representing the major traditional medicines, among them, one dedicated to homeopathy and another to TIMs named Pertubuhan Perubatan Traditional Indian

⁴⁹ Some Indians, trained in British schools, had pursed their carrier as medical doctors, for example, Dr Veerasamy Naidu who has a street in Little India called after him because he was appointed Municipal Commissioner.

⁴⁸ The low investment of the British in the development of medical services is also mentioned with regard to India, where many hospitals and dispensaries were funded by public donations, coming from provincial revenues, municipalities and district local boards, and from private subscribers (Arnold 1993; Ramanna 2001).

(PEPTIM) or, in English, Malaysian Association of Traditional Indian Medicine (MATIM). PEPTIM was incorporated into the T/CM Division of the MoH in 2004. Its activities are particularly scrutinized by TIM practitioners in Singapore as they are involved in a process to have their medicine recognised by the Ministry of Health.

PEPTIM was organised and founded by Dr. Dorai Raja V.R. Somasundaram Pillai (a Tamil), an ayurvedic practitioner and a great proponent of both siddha and ayurveda (Bodeker 2013). His functions as advisor on TIM to the Director of the Ministry of Health and to the World Health Organization, and his appointment to the T/CM standing committee in 1998, were opportunities to create synergy between the departments of traditional medicines of Malaysia and India. A memorandum of understanding (MoU) was signed between India and Malaysia in 2010 that allows for conjointly organising workshops on ayurveda and siddha in Malaysia or India, and offering scholarships annually to Malaysian nationals to prepare their Bachelors in ayurveda, siddha, unani and homeopathy. At the same time, MoUs were signed between Indian and Malay universities in the perspective of defining the curriculum for the BAMS degree in Malaysia. The website of PEPTIM⁵⁰ indicates: "He [Dr. Dorai Raja] was central to the creation of a curriculum for Ayurvedic education, standards for accreditation of overseas ISM practitioners, standards for ISM products and many other crucial components necessary for the policy development of ISMs in Malaysia." PEPTIM is accredited by the T/CM Council to register all practitioners of TIMs, including those of yoga and naturopathy. It has the responsibility of checking that the practitioners possess institutional degrees or certifications from qualified institutions recognised by the department of AYUSH, and of helping them to make authorised remedies compatible with the Poison and Dangerous Drugs Acts, 1952. PEPTIM's activities finally convinced the T/CM council of the relevance of integrating the TIMs into the health care. Śirodhara and external basti (or vasti; purification by elimination of feces, sweat and vomit replaced by soft remedies and massages, see Zimmerman *ibid*.) are practised in two hospitals, and *varma*, acupressure therapy from siddha medicine, is provided in one.

In Singapore, ayurvedic practitioners were the first to establish their association, APAS (Ayurvedic Practitioners Association of Singapore), which came into being in 2013. It was the work of Shailu, the owner of the Om Vedic Heritage Centre and the Ayur Veda Pharmacy, both in Little India. Shailu's profile is of interest as it illustrates the diversity of ownership that constitutes the ayurvedic community of Singapore, as well as the close ties maintained with the motherland and the tradition. At the entrance of her clinic, attractively decorated with beautiful wooden objects (statue of Ganesh; shelves for remedies; desk; chairs; small furniture), a portrait of an old man draped in a white *veṣṭi*⁵¹ welcomes the patients. The name displayed under the portrait, Arya Vaidya P.V. Rama Varier, is well known. It designates the founder of the AVP (Arya Vaidya Pharmacy, Coimbatore); I heard he was Shailu's grandfather. Shailu has not followed the path of her grandfather and her paternal uncle (R.P. Krishna Kumar). She studied biochemistry and migrated to Singapore where she worked for 16 years in diverse medical

-

⁵⁰ http://www.peptim.org.my/the-founder/

⁵² For the history of this family, see U. Indulal (2011).

⁵¹ A *veṣṭi* is a piece of cloth that South Indian men cover the lower part of the body with. This cloth is used especially by higher caste (notably Brahmins as is the case of the portrait's subject), although this social distinction is in decline today, and also for auspicious biographical celebrations.

institutions, before opening her clinic in 2010.⁵³ Like Mahesh Appu, she employs a BAMS doctor to manage the clinic; she herself does not practise medicine as she did not learn it from her ancestors. However, she organises course sessions on yoga, meditation and Vedic astrology. These specialties which include religion-based healing were forcefully promoted by her uncle, R.P. Krishna Kumar, who demanded their reintegration into the curriculum and practice of ayurveda. These disciplines, deemed unscientific and inadequate in medical discipline, had been discarded during the process of institutionalisation and professionalisation of the TIMs (Indulal (2011). The type of therapies and disciplines Shailu offers in her clinic corresponds to the New Age form of ayurveda (Junje 2010; Reddy 2002; Selby 2005; Warrier 2011), for which the term Vedic, several times mentioned on the website, serves as proof of its antiquity and authenticity or, to quote Martha Ann Selby (2005: 121): " as a kind of brand name (...) that simultaneously conjures up notions of antiquity and authority, no matter how false or misleading." Remedies provided in her clinic as well as in her pharmacy (which is also a clinic) come, as expected, mainly from AVP. It is worth highlighting that in the list of remedies the clinic proposes, ⁵⁴ some contain metals and minerals, such as mica, coral, deer horn, conch shell, potassium nitrate, iron, magnet and gold. However, I had not noticed such medicines among those displayed on the wooden shelves.



Shailu's grandfather, a famous vaidya ©Christian Sébastia



AVP remedies at Om Vedic Heritage Centre ©Christian Sebastia

The ayurvedic doctor I met at the Om Vedic Heritage Centre (Shailu was in India for several months) explained that Shailu being too busy to manage the association in the proper way, this was taken in charge by Dr Ravee Indusekhar. Several practitioners consider Dr Ravee Indusekhar as very efficient in developing TIM. According to them, his assets would be his acquaintance with important Indian government representatives and his ability to make them aware of the need to have ayurveda and siddha recognised by the MoH, as well as his enthusiasm

⁵³ https://www.omvedicheritage.com.sg/index.html Consulted on 30.03.2019.

⁵⁴ https://www.omvedicheritage.com.sg/business.html

in promoting TIMs globally. During my visit to the clinic Asian Ayurvedic Centre in Johor Bahru, Malaysia, I discovered that he was the owner and, especially, a member of the association PEPTIM. He is thus the person the most adequate to conduct the process of recognition of TIMs in Singapore The website of APAS states that its objectives are to:

"Integrate Singapore medicinal practice with Indian traditional Ayurvedic treatments and medicine.

Highlight the need to bring about a new dimension of health care and establish maximum understanding, recognition and acceptance of the Ayurvedic profession.

Seek maximum support from the Governments of India and Singapore to promote the aims and visions of APAS."55

The primarily means proposed by APAS to achieve these objectives concern education and political dialogue, two domains which were essential in the exchanges between PEPTIM and the T/MC division, as well as for Chinese practitioners in their obtaining of legalisation of their medicine from the MoH, Singapore:

"We will develop mandatory educational standards and qualifications of Ayurvedic practitioners in Singapore to improve the health and well-being of the public. We will encourage education, training and research in the field of Ayurveda and Ayurvedic medicine for providing high quality Ayurvedic healthcare to the public.

"We will work with the Singapore health regulatory authorities and government organisations to help form and monitor the national policies that govern Ayurveda and Ayurvedic practice in the country. We will work with the government and strive to overcome any restrictive regulatory policies that undermine Ayurveda from the mainstream healthcare in Singapore." ⁵⁶

The functions APAS aims also to play include facilitating the registration of practitioners and the importation of remedies from India. These functions are those that the T/CM division attributes to PEPTIM. There are also those which, defined by the Traditional Chinese Medicine Practitioners Act 2000, are attributed to the Traditional Chinese Medicine Practitioner Board (TCMPB) in charge of registering TCM practitioners (acupuncturists and TCM physicians), to accredit TCM institutions and TCM courses and to control the medical ethics of practitioners.

In June 2016, Dr. Ravee Indusekhar organised the first international conference in Singapore in which the department AYUSH of India participated with around 200 delegates. An article in Press Trust of India says that this conference had been called for by the Prime Ministers of India, Narendra Modi, and of Singapore, Lee Hsien Loong. Dr Indusekhar was certainly, directly, or indirectly through his Indian network, at the root of this bilateral decision. The involvement of Narendra Modi in this project is not surprising as, being a fervent nationalist, he is a great supporter of "Vedic sciences", i.e. ayurveda and yoga, and of their worldwide acceptance. The success of this conference incited APAS to renew the experience each year for which he benefitted from the financial support of the High Commission of India in Singapore.

⁵⁶ http://www.ayurvedicpractitioners.org/mission-vision Consulted on 18.05.2019

⁵⁵ http://www.ayurvedicpractitioners.org/about-us Consulted on 18.05.2019

⁵⁷ https://www.financialexpress.com/lifestyle/health/immense-scope-for-promoting-ayurveda-globally/300933/ Consulted on 20.07.2019. The bilateral decision was taken during the visit of Narendran Modi to Singapore in November 2015.

An article in the press concerning the second international ayurvedic conference jointly organised in June 2017 by AYUSH, APAS and the High Commission of India in Singapore reports Dr Indusekhar's primary expectation:

"to develop and establish a well-structured, regularised and legalised system of Ayurvedic practice in Singapore similar to Traditional Chinese Medicine (TCM) practice." ⁵⁸

Dr Goh Cheng Soon, Director of the T/CM Division, Malaysia, was among the important key speakers to deliver a talk on the policy of T/CM and the way some therapies of TIMs have been integrated into public health. ⁵⁹ Dr Indusekhar's reference to the status of TCM in Singapore and the talk of the director of the T/CM division make clear the objective of APAS which is to prevail on the MoH of Singapore to recognise ayurveda as a complete medical system, and not simply as a massage and wellness provider. This recognition would allow also the reimbursement of medical fees by government and private insurances. This criterion is often highlighted by TIM practitioners who lament that ayurvedic therapies being too costly and but rarely accepted by private insurance companies, patients who have recourse to traditional medicines prefer to turn to TCM.

The following year, two additional conferences were organised, among these the most publicised was the 4th International conference for which the six doctors of the Siddha Medicare & Ayush Herbal were invited by APAS to found their own siddhaPAS and to co-organise it with APAS members. An article of Press Trust of India regarding this event reports that Mr Jawed Ashraf, Indian High Commissioner, stated during his talk: "[D]ocuments related to Ayurvedic and Siddha medicines have been submitted to the Singapore Health Authority" with the objective of signing an MoU with Singapore "for an inter-government cooperation for promotion of research, recognition, and certification of ayurveda as traditional medicine." The speeches at the conference were in line with the objectives of promoting ayurveda and siddha as complete medical systems. They focused mostly on their potency for treating serious and chronic diseases and illnesses, such as immune disorders, lifestyle diseases, dengue, geriatric health issues, mental imbalance, and pediatric ailments.

While conferences are important to publicise TIMs and engage political dialogues between parties, they are not sufficient to make them known to the public. Several practitioners I met regularly give talks in schools and in various associations to expose the principles of their medicines and to raise awareness among children and adults of their therapeutic ability to treat diseases. This activity is also a means to revalorise the medical properties of their therapies and to distinguish it from the practices of SPAs and wellness centres.

Conclusions:

_

 $^{^{58}\} http://the independent.sg/june-21-conference-advances-ayurved a-in-sing apore/\ Consulted\ on\ 21.07.2019$

⁵⁹ Videos of talks are available at: https://www.youtube.com/channel/UCQVFAEZQgA1qizHP7Pt4DXA

⁶⁰ https://www.deccanherald.com/international/india-formal-recognition-traditional-medicines-singapore-676132.html

The comparison of the practice of siddha and ayurveda in Singapore shows differences which reflect their respective practices in India. Because siddha was assimilated to ayuvedic medicine when the British founded the schools of Indian medicines in Madras Presidency, its institutionalisation as siddha medicine occurred very late (Sebastia 2010). Consequently, siddha medicine is still practised in India today by numerous paramparaiya vaittiyar, like Sivanathan, whose knowledge and know-how are very heterogeneous, varying from one practitioner to another and from one district of Tamil Nadu to another. The identity construction of Sivanathan, according to the way he acquired his knowledge -through gurukulam and meditation- and the high value he accords to his medicines, including herbometallic drugs, reflects his deep anchorage in siddha tradition, in which religious and magic healing, astrology, yoga and alchemy are closely allied to medical domain. The comparison between his medical practices and those at Ganeis Herbals Centre / Ayurbumi, Johor Bahru, Malaysia, epitomises the diversity of the siddha traditional milieu. Mr Ganesan, the owner of this clinic, represents the 4th generation of a siddha practitioner family in Malaysia. His grandmother was a siddha vaittiyar specialising in child and maternal diseases. His father, a siddha vaittiyar, died when he was young, but he learnt medicine from his mother's brother, also a vaittiyar. He then approached a guru in Kuala Lumpur for apprenticeship, and then, he opened his clinic in Johor Bahru where he is the main consultant. With the aim of developing his clinical practice, he went to Tamil Nadu and Kerala to learn varma therapy from an $\bar{a}s\bar{a}n^{61}$ at Chennai, and to enhance his ayurveda skills respectively. Although specialising in siddha, his medical practice is very oriented towards Kerala-influenced ayurveda, as he provides essentially pañcakarma therapies, and ayurveda remedies imported through diverse companies. Unlike Sivanathan, he prepares no handmade medicines and his practice of the siddha medical tradition is minimal. The siddha identity part of the clinic is, however, reflected by the practice of *varma* therapy, acupressure on energy points. Sivanathan does not practice this therapy as it is a tradition specific to the erstwhile Travancore kingdom (Kanniyakumari and South Kerala) (Sebastia 2019, 2012; Sieler 2015). However, it is particularly well developed in Malaysia where it is provided in several siddha clinics and is practised in the traumatology department of the Sungai Buloh Hospital since 2017.

The ayurvedic orientation of Ganeis Herbals Centre is not an exception. Many siddha clinics in India, notably those close to Kerala, use on their boards the double designation siddha and ayurveda. This is also the case in Malaysia where, among the 27 siddha clinics I identified from the PEPTIM website and the Internet, 5 have inscribed on their board 'ayurveda' or 'ayur' with or without the siddha designation. This terminological confusion may be related to the great popularity of ayurveda all over the world, ayurveda being much better known than siddha medicine. However, Frederick C. Colley mentions that combination of AYUSH therapies was commonly practised in Malaysia:

"In general Indian doctors in Malaysia practice a combination of Homeopathic, Ayurvedic, Unani and Siddha medicine, although some are specialists in one or more of these systems. Each system has particular advantages. Ayurveda has many medications and tonics containing vegetable products and is considered to be especially good for improving nutrition. Unani has some unique medications and also has the advantage of being acceptable to Muslim patients. Siddha medicine

-

⁶¹ The terme $\bar{a}s\bar{a}\underline{n}$ indicates that the person from whom he learnt varma therapy was a native of Kanniyakumari district, as it corresponds to the title used in this region for guru or master. An $\bar{a}s\bar{a}\underline{n}$ is an expert, well renowned for diverse specialties such as varma, bone setting, preparation of complex remedies, manuscript reading, venom treatment, child and mother treatment, etc.

utilizes powerful mineral based drugs. Homeopathic medicine is generally used to treat chronic diseases over a long period." (*ibid*.: 85)

A combination of practices at the Ganeis Herbals Centre, except for *varma* therapy, do not differ from those of ayurveda clinics in Singapore which all offer the 'same' package of gentle *pañcakarma* therapies and remedies from Kerala. Compared to siddha practice, not only does these ayurvedic practices appear as homogenous, but also are consistent with the regulations of Singapore. Practitioners do not have to juggle with the laws to provide appropriate remedies, as Sivanathan or Shah do, and their practice of massage means that their clinic can be registered by the HSA without difficulty. However, the wellness properties for which ayurveda is greatly publicised by almost all the clinics including Ganeis Herbals Centre, may pave the way for siddha medicine to play a role in the management of diseases, at least in Singapore where the two siddha clinics do not offer *pañcakarma* treatment.

This makes it necessary to examine the practice of siddha and ayurveda in Singapore (and Malaysia) in accordance with the categories defined by Dagmar Wujastyk and Frederick M. Smith (2008) regarding ayurveda practised in India and in transnational situations. They term ayurveda as practised in India *modern ayurveda* because its knowledge has been reworked by "the processes of professionalization and institutionalization brought about in India by what has been called the nineteenth-century revivalism of Ayurveda" (*ibid.*: 2); and it is also "characterized by a tendency towards the secularization of ayurvedic knowledge and its adaptation to biomedicine, and at the same time by attempts to formulate a unitary theory based on doctrines found in the classical ayurvedic texts." (*ibid.*: 2) In contrast, these authors use the term *global ayurveda* to define its practice in the transnational context in which they identify four paradigms: New Age Ayurveda, Ayurveda as mind-body medicine, Maharishi Ayur-Ved and traditional Ayurveda in an urban world.

The studies on transnational ayurveda compiled by Dagmar Wujastyk and Frederick M. Smith all concern western countries, particularly the US and European countries. However, the practice of ayurveda in Singapore and Malaysia presents some differences concerning both modern and global ayurveda paradigms. The differences are related to the identity of practitioners. While in western countries practitioners are westerners who have learnt ayurveda from diverse sources, 62 in Singapore and Malaysia, they are all Indians, trained in India in ayurveda colleges and/or through the gurukulam system, who have practised in India before migration. Consequently, their practice in these countries is not distinguished from that in India. While it may be defined as modern ayurveda due to the institutional training of its ayurvedic doctors, even though they may complement their curriculum with the teachings of a guru, it presents some paradigms of global ayurveda due to its Kerala signature. Indeed, Kerala is particularly known for ayurveda medical tourism, which has been developing since the 1990s. This tourism is composed of a western clientele and, increasingly, of prosperous urban Indians, attracted by packages of pañcakarma, yoga/meditation, diet management through 'ayurvedic' vegetarian cuisine, (including tours), promoted by Kerala ayurvedic SPA resorts, as holistic and authentic care for cleansing and rejuvenating body and mind: relaxing and beautifying the body

⁶² Ayurvedic courses in US and European countries organised by private schools and associations (Ayurvedic Institute, Kerala Ayurveda Academy, California College of Ayurveda, The European Academy of Ayurveda, European Ayurveda Association, etc.); ayurvedic practitioners in India; ayurveda workshops organised in US and Europe; ayurvedic text books; books by Robert Svoboda, David Frawley, Vasant Lad, Atreya Smith and Deepak Chopra, etc.

and calming the mind. The success of such centres, which manipulate paradigms, more or less of *global ayurveda* to attract an international clientele, has influenced the clinical practice of ayurvedic doctors in Kerala, and also in India in general. In Singapore, this influence is the most developed at the Om Vedic Heritage Centre, where *pañcakarma* is provided along with courses in yoga and meditation, and diet management, as well as with Vedic astrology whose identification refers to ancient and highly valued Indian knowledge.

Compared to ayurvedic practice, that of the three siddha clinics that we have met in this study varies a lot: *modern siddha* defines the best practice of Siddha Medicare & Ayush Herbal, while *tradition siddha* matches that of Siddha Maruthuva & Ayurvedic clinic. Regarding the practice of Ganeis Herbals Centre, this would be defined more accurately by *global ayurveda*. However, ethnography of the consultations provided there would be necessary to identify the place of siddha. Let's add that the globalisation of siddha medicine does not seem to have started yet as it is little known abroad. But, its current revival by diverse proponents (siddha or yoga practitioners, siddha-versed yogis, ashrams) some of whom tour western, Gulf and Asian countries, might favour its promotion, as might that of its specialties such as kunṭalini yoga, alchemy, philosophy, etc.

References

- Amrith, Sunil S. (2010). 'Indians overseas. Governing Tamil migration to Malaya 1870-1941, *Past and Present*, 208: 231-261.
- Anandan, Anaivaari R. (2005). A *Compendium of Siddha Doctrine*, Chennai: Department of Indian Medicine and Homeopathy.
- Ang, S.C. and J.M. Wilkinson (2013). 'A preliminary study of complementary and alternative medicine (CAM) practitioners in Singapore', *Complementary Therapies in Medicine*, 21: 42-49
- Arnold, David (1993). *Colonizing the Body. State Medicine and Epidemic Disease in Nineteenth-Century India*, Berkeley-Los Angeles-London: University of California Press.
- Bala, Poonam (ed.) (2012). Contesting Colonial Authority. Medicine and Indigenous Response in Nineteenth- and Twentieth-Centuries India, Maryland: Lexington Books.
- Banerjee, Madhulika (2004). 'Local Knowledge for World Market. Globalising Ayurveda', *Economic and Political Weekly*, January 3: 89-93.
- Bishop, George D. (1998). 'East Meets West. Illness Cognition and Behaviour in Singapore', *Applied Psychology: An International Review*, 47 (4): 519-534.
- Bode, Maarten (2008). *Taking Traditional Knowledge to the Market. The Modern Image of the Ayurvedic and Unani Industry, 1980-2000*, Hyderabad: Orient Longman, 'New Perspectives in South Asian History, 21'.
- Bodeker, Gerard (2013). 'In memoriam Dato' Dr. Dorai Raja', *Journal of Ayurveda and Integrative Medicine*, 4 (4): 247-248.
- Burbidge, F.W. (1880). The Gardens of the Sun or A Naturalist's Journal on the mountains and in the forests and swamps of Borneo and the Sulu Archipelago, London: John Murray.
- https://archive.org/details/gardenssunorana03burbgoog/page/n13 Consulted on 15.05.2019
- Chen, Chunliang, Chong, Ying Jie, Hie, Szu Liang, Sultana, Rehena, Lee, Sze Huay Dorothy, et al. (2016). 'Complementary and alternative medicines use among pediatric patients with epilepsy in a multiethnic community', *Epilepsy & Behavior*, 60: 68-74.

- Chow, Wen Hann, Chang, Pearlly, Lee, Soo Chin, Wong, Alvin, Shen, Han-Ming, et al. (2010). 'Complementary and Alternative Medicine among Singapore Cancer Patients', *Annals Academy of Medicine*, 39 (2): 129-135.
- Colley, Frederick C. (1978). 'Traditional Indian Medicine in Malaysia', *Journal of the Malaysian Branch of the Royal Asiatic Society*, 5 (1): 77-109.
- Ganapathy, T.N. (1993). *The Philosophy of the Tamil Siddhas*, New Delhi: Indian Council of Philosophical Research.
- Hardiman, David (2009). 'Indian medical indigeneity from nationalist assertion to the global market', *Social History*, 34 (3): 263-283.
- Harilal, M.S. (2008). *Home to market. Responses, resurgence and transformation of Ayurveda from 1830s to 1920*, Working Paper 408, Thiruvananthapuram: Centre of Development Studies. Consulted on 18.06.2019.
- https://pdfs.semanticscholar.org/23de/4fb45d5b050fcf98522272887c814f29532a.pdf
- Hasneezah, H., Liyanatul, Najwa, Noor, Haslinda I., Nadiatul Ima Z., Hafeez, et al. (2016). 'Analysing the health policy making process: national policy of traditional and complementary medicine in Malaysia', International Journal of Public Health and Clinical Sciences, 3 (3): 17-31.
- Indulal, U. (2011). 'A true plural being. A life profile of P. R. Krishna Kumar', *Journal of Ayurveda & Integrative Medicine*, 2 (1): 32-34.
- Junje, Patricia (2010). "This is Not Ayurveda". *New Age Ayurveda* in the context of Ayurveda's Globalization: between labeling and reinvention, September, Heidelberg.
- https://patriciajunge.files.wordpress.com/2010/09/new-age-ayurveda-and-the-challenges-of-medical-pluralism.pdf consulted on 06.06.2019
- Kandaswamy Pillai, N. (1979). *History of Siddha Medicine*, Chennai: Department of Indian Medicine and Homeopathy.
- Kim, Yun Jin (2017). 'The Current Studies of Education for a Traditional and Complementary Medicine in Malaysia', Journal of Evidence-Based Complementary & Alternative Medicine, 22 (4): 531-537.
- Kumar, Deepak and Raj Sekhar Basu (eds.) (2013). *Medical Encounters in British India*, New Delhi: Oxford University Press.
- Kutumbiah, P. ([1962] 1999). Ancient Indian Medicine, Hyderabad: Orient Longman.
- Langford, Jean (2002). Fluent Bodies. Ayurvedic Remedies for Postcolonial Imbalance, Durham: Duke University Press.
- Leslie, Charles (ed.)(1976). *Asian Medical Systems: A Comparative Study*, University of California Press, Berkeley.
- Leslie, Charles and Allan Young (eds.)(1992). *Paths to Asian Medical Knowledge*, Berkeley/Los Angeles/Oxford: University of California Press.
- Lim, M.K., Sadarangani, P., Chan, H.L and J.Y. Heng (2005). 'Complementary and alternative medicine use in multiracial Singapore', *Complementary Therapies in Medicine*, 13: 16-24.
- Moorthy, Ravichandran (2016). 'Ethnic Indians in Malaysia: History and Issues of Development', in D. Jeyasooria and K.S. Nathan (eds), *Contemporary Malaysian Indians. History, Challenges and Prospects*, pp. 39-56. Selangor: Institute of Ethnic Studies, UKM.
- Mujar, Noor Mastura Mohd, Dahlui, Maznah, Emran, Nor Aina, Hadi, Imisairi Abdul, Wai, Yan Yang, et al. (2017). 'Complementary and alternative medicine (CAM) use and delays in presentation and diagnosis of breast cancer patients in public hospitals in Malaysia', *Plos one*, April 27: 1-12.

- https://doi.org/10.1371/journal.pone.0176394
- Mukharji, Projit Bihari (2016). *Doctoring Traditions. Ayurveda, Small Technologies and Braided Sciences*, Chicago/London: The University of Chicago Press.
- Natarajan, Kanchana (2004): "Divine Semen' and the Alchemical Conversion of Iramatevar'. *The Medieval History Journal*,7 (2): 255–278.
- Nazrul, Islam (2017). *Chinese and Indian Medicine Today. Branding Asia*, Singapore: Springer Nature.
- Ooi, Giok Ling (1991). 'British Health Care Development and the Persistent Ethnic Medicine in Peninsular Malaysia and Singapore', *Southeast Asian Studies*, 29 (2): 158-178.
- Panikkar, K.N. (1992). 'Indigenous medicine and cultural hegemony: A study of the revitalization movement in Keralam', *Studies in History*, 8 (2): 283-308.
- Patwardhan, Bhushan, Warude, Dnyaneshwar, Pushpangadan, P. and Narendra Bhatt (2005). 'Ayurveda and Traditional Chinese Medicine: A Comparative Overview', *eCAM*,2(4): 465-473.
- Ray, Rajesh (2014). *Indians in Singapore 1819-1945: Diaspora in the Colonial Port City*, New Delhi: Oxford University Press.
- Ramanna, Mridula (2001). 'Gauging Indian Responses to Western Medicine. Hospitals and Dispensaries, Bombay Presidency; 1900-20, in D. Kumar (ed.), *Disease and Medicine in India. A Historical Overview*, pp. 233-248. New Delhi: Tulika Books.
- Reddy, Sita (2002). 'Asian Medicine in America: The Ayurvedic Case', *The Annals of American Academic of Political and Social Sciences*, 583: 97-121.
- Sambasivam Pillai, T.V.(1991). *Dictionary of Medicine, Chemistry, Botany and Allied Sciences*, Volume 2, Madras: Directorate of Indian Medicine and Homeopathy.
- Sambasivam Pillai, T.V.(1994). *Dictionary of Medicine, Chemistry, Botany and Allied Sciences*, Volume 5, Madras: Directorate of Indian Medicine and Homeopathy.
- Sebastia, Brigitte (2019). From siddha corpus to siddha medicine. Reflection on the reduction of siddha knowledge through exploration of manuscripts', in A. Mishra (ed.), *Local Health Traditions: Plurality and marginality in South Asia*. pp. 129-155. New Delhi: Orient BlackSwan.
 - (2018). Preserving identity or promoting safety? The issue of mercury in siddha medicine: a brake on the crossing of frontiers', in D. Wujastyk (ed.), *Histories of Mercury in Medicine across Asia and Beyong*, pp 115-151. Delhi: Motilal Banarsidass, 'Indian Medical Tradition.(1st publication, 2016, Special Volume of Asiatische Studien).
 - (2012). 'Competing for medical space. Traditional Practitioners in the Transmission and Promotion of Siddha Medicine. In V. Sujatha and L. Abraham (eds), *Medicine, state and society. Indigenous medicine and medical pluralism in contemporary India*, 165-185. Delhi, Orient BlackSwan.
 - (2010). 'Governmental institution versus associations. Multifaceted expression of siddha in Tamil Nadu'. http://rcsi.hypotheses.org/317
- Sieler, Roman (2015). Lethal Spots, Vital Secrets. Medicine and Martial Arts in South India, New York: Oxford University Press.
- Selby, Martha (2005). 'Sanskrit Gynecologies in Postmodernity: The Commoditization of Indian Medicine in Alternative Medical and New Age Discourses on Women's Health', in J.S. Alter (ed.), Asian Medicine and Globalization, pp. 120-131. Philadelphia: University of Pennsylvania Press.

- Sinha, Vineeta (1995). *Theorizing the Complex Singapore Health Scene: Recontextualizing "Medical Pluralism"*, unpublished dissertation for the degree of Doctor of Philosophy, Baltimore: John Hopkins University.
- Suppiah, Ummadevi (2016). 'The Chettiar's Role in the Colonial Economy of Malaya during the British Era', in D. Jeyasooria and K.S. Nathan (eds), *Contemporary Malaysian Indians*. *History, Challenges and Prospects*, pp. 71-91. Selangor: Institute of Ethnic Studies, UKM.
- Tate, Muzafar Desmond (2008). *The Malaysian Indians. History, Problems and Future*, Selangor: Strategic Information and Research Development Centre.
- Thinnappan, S.P. and Vairavan, Soundara Nayaki (2010). *Nagarathars in Singapore*. Singapore: Navaso Pte Ltd .
- Vagadasalam, Parvathy (1998/1999). *Traditional Indian medicine in Singapore: a geographical perspective*, unpublished dissertation for the degree of BA, Singapore: Department of Geography, University of Singapore.
- Venkatraman, R. (1990). A History of the Tamil Siddha Cult, Madurai: NS Ennes Publications.
- Warrier, Maya (2011). 'Modern Ayurveda in Transnational Context', *Religion Compass*, 5 (3): 80–93.
- Weiss, Richard S. (2009): *Recipes for Immortality. Medicine, Religion and Community in South India*. New York: Oxford University Press.
- White, David Gordon ([1996] 2004). *The Alchemical Body. Siddha Traditions in Medieval India*, NewDelhi: Munshiram Manoharlal Publishers.
- Wujastik, Dagmar (2013). 'Perfect Medicine. Mercury in Sanskrit Medical Literature', *Asian Medicine*, 8: 15-40.
- Wujastyk, Dagmar and Frederick M. Smith (eds.) (2008). *Modern and Global Ayurveda*. *Pluralism and Paradigms*, Albany: State University of New York Press.
- Wujastyk, Dominik (1998). The roots of Ayurveda, Kolkata: Penguin Books.
- Yeo, Angela SH, Yeo, Jonathan CH, Yeo, Colin, Lee, Chau Hung, Linn, Lan Fern, et al. (2005). 'Perception of complementary and alternative medicine amongst medical students in Singapore - a survey', *Acupuncture in Medicine*, 23 (1): 19-26.
- Zimmerman, Francis (1992). 'Gentle Purge: The Flower Power of Āyurveda', in C. Leslie and A. Young (eds.), *Paths to Asian Medical Knowledge*, pp. 209-223. Berkeley/Los Angeles/Oxford: University of California Press.
- Zysk, Kenneth G. (1996). *Medicine in the Veda. Religious healing in the Veda*, Delhi: Motilal Banarsidass.