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AYURVEDA VERSUS BIOMEDICINE: COMPETITION, COOPERATION OR INTEGRATION?

THE CASE OF THE "OUTCOME ORIENTED, EVIDENCE INFORMED AYURVEDIC COMMUNITY HEALTH PROMOTION PROGRAM" IN ANURADHAPURA, SRI LANKA

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Non-communicable diseases [NCDs] are increasing in both developing and developed countries. Western medicine is not able to offer satisfying solutions and treatments for people suffering from NCDs. TM/CAM have shown promise of effectiveness in the prevention and treatment of NCDs and many people now turn to TM/CAM. Hence it is of great interest to investigate the possibilities of increased integration of TM/CAM in national health care systems. This study was carried out in Sri Lanka, with the aim to investigate the main forces promoting and obstructing cooperation and communication between practitioners of Ayurvedic, Western and traditional medicine, in order to see how this affects integration of the medical subsystems. The focus of this qualitative study was the "Outcome oriented, evidence informed Ayurvedic Community Health Promotion Program"; a collaboration project aiming to integrate Ayurveda and Western medicine in primary health care. Semi-structured interviews, participatory observation and document analysis were carried out during three months in Sri Lanka and the results were analysed using Paul Unschuld's theory on structured competition, cooperation or integration. The results indicate that the overall coexistence of Ayurveda and Western medicine in Sri Lanka is structured competition, while the collaboration project is aiming for structured cooperation. The results further show that the Sri Lankan parallel political approach to integration can be argued to obstruct integration, while the regulation of Ayurvedic practitioners increases cooperation through professionalization. Education is a main influencing factor for cooperation; lack of CAM-knowledge in medical students obstructs cooperation while westernization of Ayurvedic doctors both promotes and obstructs cooperation and integration. Capacity building, research based on Ayurvedic fundamentals and keypersons with knowledge of both sectors are of importance for increased cooperation and integration to come about.

Keywords: Ayurveda, traditional, complementary and alternative medicine (TM/CAM), allopathic medicine, integration, plural health care, Sri Lanka.

AYURVEDA VERSUS BIOMEDICINE: KONKURRENS, SAMARBETE ELLER INTEGRATION?

EN STUDIE AV PROJETET “THE OUTCOME ORIENTED, EVIDENCE INFORMED AYURVEDIC COMMUNITY HEALTH PROMOTION PROGRAM” I ANURADHAPURA, SRI LANKA

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Forsberg, S. Ayurveda versus biomedicine: Konkurrens, samarbete eller integration? En studie av projektet “The Outcome oriented, evidence informed Ayurvedic community health promotion program” i Anuradhapura, Sri Lanka. *Examensarbete i Folkälsovetenskap, 15 hp.* Malmö Högskola: Fakulteten för hälsa och samhälle, Folkhälsovetenskapliga institutionen, 2013.

Kroniska sjukdomar ökar världen över, i både utvecklings- och industrialiserade länder. Mäniskor som lider av kroniska sjukdomar finner ofta den västerländska medicinen oförmögen att behandla deras sjukdommar, och vänder sig istället till traditionell, komplementär och alternativ medicin [TM/CAM]. TM/CAM har visat sig vara effektiv vid prevention och behandling av kroniska sjukdomar, varför det är av stort intresse att undersöka möjligheten för ökad integration av TM/CAM inom de nationella sjukvårdssystemen. Syftet med denna studie är att undersöka de krafter som främjar respektive förhindrar kommunikation och samarbete mellan utövare av ayurveda, västerländsk och traditionell medicin, samt att se hur detta påverkar integrationen av de medicinska subsystemen på Sri Lanka. Fokus för studien är ett specifikt samarbetsprojekt, “The outcome oriented, evidence informed community health promotion program”, vars mål är att integrera ayurveda och västerländsk medicin inom primärvården. En kvalitativ studie genomfördes under tre månader på Sri Lanka med hjälp av semi-strukturerade intervjuer, deltagande observation samt analys av dokument. Paul Unschulds teori om strukturerad konkurrens, samarbete eller integration användes vid tolkningen av resultaten. Resultaten tyder på att den huvudsakliga formen för samexistens mellan ayurveda och västerländsk medicin på Sri Lanka är strukturerad konkurrens, medan samarbetsprojektet siktar mot att uppnå strukturerat samarbete. Det parallella politiska system som styr samexistenseen mellan ayurveda och västerländsk medicin tycks förhindra integration, medan en ökad professionalisering genom nationella regleringar skapar ökat samarbete och integration. Brist på kunskap om ayurveda bland medicinstudenter förhindrar samarbete. Samtidigt kan inflytandet från västerländsk medicin i den auyurvediska universitetsutbildningen till synes både främja och förhindra samarbete och integration. Genom att höja kompetensen omkring forskningsmetodik och hälsovårdsystem hos ayurvediska läkare kan samarbete främjas. Likaså är forskning utformad med hänsyn till ayurvediska grundprinciper samt närvaro av nyckelpersoner med kompetens inom både ayurveda och västerländsk medicin främjande faktorer för samarbete och integration.

Nyckelord: Ayurveda, traditionell, komplementär och alternativ medicin (TM/CAM), allopatisk medicin, integration, Sri Lanka

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Abbreviations and definitions

BAMS = Bachelor of Ayurvedic Medicine and Surgery
BMMS = Bachelor of Medicine, Bachelor of Surgery
CAM = Complementary and alternative medicine
CHPP = The Ayurvedic Community Health Promotion Program in Auradhapura
CMO = Community Medical Officer, in this case Ayurvedic CMO´s employed in the CHPP.
DA = Diploma in Ayurveda
FGD = Focus group discussion
HPO = Health Promotion Officer
MIM = Ministry of Indigenous Medicine
MOH = Ministry of Health
NCD = Non-communicable diseases, also called chronic diseases
PHC = Primary health care
PHI = Public Health Inspector
PHM = Public Health Midwife
TM/CAM = Traditional, complementary and alternative medicine
TM = Traditional medicine
TMP = practitioner of traditional medicine
WHO = World Health Organization

Western medicine, also called scientific medicine, biomedicine, modern or allopathic medicine, is the scientific medicine developed in the Western industrialized world during the last two centuries (Debas, Laxminarayan & Straus, 2006).

The following definitions of TM, CAM and TM/CAM are used by the World Health Organisation [WHO] in the WHO Traditional Medicine Strategy 2002-2005.

Traditional medicine [TM] includes diverse health practices, approaches, knowledge and beliefs incorporating plant, animal, and/or mineral based medicines, spiritual therapies, manual techniques and exercises applied singularly or in combination to maintain well-being, as well as to treat, diagnose or prevent illness. TM is a comprehensive term used to refer both to traditional medical systems such as traditional Chinese medicine, Indian Ayurveda and Arabic Unani medicine, and to various forms of indigenous medicine.

Complementary and alternative medicine [CAM] is the term used for practices and products that people use as alternatives or in conjunction with Western medicine, in countries where the dominant health care system is based on allopathic medicine, or where TM has not been incorporated into the national health care system.

TM is used when referring to Africa, Latin America, South-East Asia and/or the Western Pacific, whereas CAM is used when referring to Europe and/or North America (and Australia). When referring in a general sense to all of these regions, the comprehensive **traditional, complementary and alternative medicine [TM/CAM]** is used.

Ayurveda is a form of traditional medicine developed in India between the 5th century BC and the 5th century AD. It is based on philosophical principles written down in sacred texts. Today Ayurveda is widely practiced in South Asia, especially in India, Bangladesh, Nepal, Pakistan and Sri Lanka (WHO, 2002, p. 2). In Sri Lanka, the term Ayurveda has come to include all systems of medicine indigenous to Asian countries, that is, both Ayurveda, Siddha, Unani and the Sri Lankan indigenous medicine deshiya chikitsa (Wolffers, 1988, p. 545).

Integration. The word integration in this text is used to signify a state where Ayurveda and Western medicine are equally significant and respected parts of the national health care system. Integration in this sense would mean that the practitioners of the different medical subsystems cooperate around the treatment of patients. The cooperation could be in the form of officially refering patients to each other, through cooperating in the treatment of patients or through common workplaces. The word integration, when used on its own, is similar to what Unschuld defines as structured cooperation. It should not be confused with Unshulds' concept of structured integration, which is defined as a total merging of two different medical subsystems, to such an extent that one does not talk about distinct medical subsystems anymore.

1. INTRODUCTION

The only country in the world with a Ministry of Indigenous Medicine! Amazing! I have to go there! Those were the first thoughts that came into my head as I started to read about the plural health care system of Sri Lanka. Since many years I had wanted to look deeper into what promotes and obstructs the integration of traditional and complementary and alternative medicine with the biomedical health care system. Having worked as a massage therapist for many years, I knew the world of complementary and alternative medicine from the inside. I knew from personal experience and from seeing my clients get better that CAM holds a promise for the future of medicine. I also knew how much resistance CAM is often met by, at least in Sweden. To find a country that seemed to be working more progressively with integration was intriguing, and I started to plan a field study. When studying public health and medical anthropology at Malmö University I got inspiration and tools for my research project, and things started to take form. I studied the wellknow medical anthropologists Arthur Kleinman and Cecil G. Helman, I studied the WHO Traditional Medicine Strategy 2002-2005, global health and much more. I came to the conclusion that I wanted to study the practitioners of the different medical systems and their interaction and how this affects integration. Earlier research within medical anthropology has focused mainly on the interaction between patients and practitioners, or how patients chose health care. Since the practitioners are the main actors within the field of medical systems, I wanted to approach the topic of integration through understanding what affects their attitudes, perceptions and behaviours when it comes to cooperation. This is one of the areas of focus in the WHO Traditional Medicine Strategy 2002-2005, so it seemed to be of importance.

With this question in the back of my head I went to Sri Lanka. Once there, the question first seemed very strange to ask, since it became so obvious that the worlds of Ayurveda and Western medicine were very separate. While browsing the internet for information one day, I came across Dr Pilapitiyas name. He was both a Western medical doctor and a practitioner of Ayurveda, as well as the director of the Center for Education and Research on Complementary and Alternative Medicine [CERCAM] and involved in a collaboration program aiming to integrate Ayurveda and Western medicine. I had found what I was looking for! One week later I was having tea with Dr Pilapitiya in his garden, and was offered the opportunity to conduct my study on the collaboration program! This was just about the most interesting it could get. I would have the opportunity to have one of the most respected authorities on the topic of integrated medicine in Sri Lanka as my supervisor, and I would get to study a unique pilot project aiming to integrate Ayurveda and Western medicine.

Since the project had only recently started up during the time of my field research, it had not yet yieded any results to be studied. Instead it was of interest, to both me and to CERCAM, to study the perceptions and attitudes towards integration and collaboration held by the different practitioners involved, in order to get a better understanding of possible obstacles and strengths. For me, it was the start of a journey into understanding the complexities of integration of traditional and Western medicine, as well as the complexities of developing a primary health care system. Through studying this project I would both gain knowledge about the structural forces in society that affect integration as well as get to understand how a

collaboration project can deal with the practical challenges that arise when the professionals of Western and Ayurvedic medicine collaborate. As far as I know, this kind of study has never been conducted in Sri Lanka before, and the project as such is quite uniqe in the world.

2. THE PROBLEM

All over the world, there is an increasing incidence of chronic diseases such as cardiovascular diseases, diabetes, hypertension, depression and addictions to tobacco and alcohol. Chronic diseases are commonly called non-communicable diseases [NCDs]. NCDs used to be thought of as diseases of the rich, but according to WHO (2001), 80 percent of the deaths due to NCDs are now occurring in low- and middleincome countries. According to Helman (2007, p. 105), one of the reasons for the increase of NCDs is the sucesses of Western medicine[1]. Western medicine has to a large extent eradicated infectious diseases such as smallpox and diphteria as well as decreases infant and maternal mortality. Hence the life expectancy has increased, which in turn has created a situation where people now live long enough to suffer from chronic diseases. Another reason for the increase of NCDs mentioned by Debas, Laxminarayan and Straus (2006) is the process of globalization in the developing world. With globalization comes a change in lifestyle and diet, obesity, lack of exercise and stress, all contributing factors to the development of NCDs (ibid). To NCDs such as cardiovascular diseases, diabetes, hypertension, depression and addictions to tobacco and alcohol, Western medicine does not have any "quick fix" (Helman, op cit.). According to Bendelow and Menkes (2006, p. 2) these diseases require a different approach to health care than what is offered by Western medicine. For the treatment of NCDs it is needed to take multifactorial causations and complex mind-body relationships into account. This is offered by the holistic approach of complementary and alternative medicine [CAM] (ibid). Altough more evidence is needed, TM/CAM[2] have shown potential for reducing the risk factors of NCDs (Kumar, Chandel, Bhardwaj, Raina & Sharma, 2012) and a growing part of the population is now turning to CAM for the tratment of NCDs (Helman, op.cit., p. 105).

For a variety of cultural, social, economic and scientific reasons, CAM has been largely excluded by Western medicine (Bendelow and Menkes, 2006). However, the popularity of CAM has accelerated in the Western world and, according to WHO (2002, p. 1) today almost half of the population in many industrialized countries regularly use some form of CAM. In the developing countries, the use of traditional medicine is often very common. In Africa, it is estimated that around 80% of the population use TM and in Asia and Latin America a large part of the population continue to use TM as a result of historical circumstances and cultural beliefs (ibid). A problem experienced in many developing countries with plural health care systems, is the competition of resources between the Western medical system and the traditional medicine. This often leads to a situation of diminished

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[1] For definition, please see Abbreviations and definitions p. 8.
[2] For definition, please see Abbreviations and definitions, p. 8

resources and impact of the traditional medicine on primary health care (Unschuld, 1976, p. 6).

The increase of NCDs world wide, couple with rising costs of modern medical care, makes the World Health Organization state the importance of finding new ways to reform the health care systems in the world (World Health Organization [WHO], 2001). Debas, Laxminarayan and Straus (2006) emphazise the increasing importance for both developed and developing countries to include TM/CAM into their national health care strategies. According to Bodeker and Kronenberg (2002) most of the research on the topic of integration has been focusing on clinical factors such as efficacy and mechanisms of action of drugs, while the wider public health dimensions have been neglected. The two authors argue that there is a need for ethnographic, epidemiological, observational, survey, and cohort methodologies, all of those falling within the public health domain.

The role of traditional medicine and its practitioners in primary health care was recognized by WHO already in the 1978 Alma Ata Declaration (WHO, 2008a). Since then, the world-wide increasing use of TM/CAM, and the interaction between the Western medical sector and the TM/CAM sector, has given rise to challenges that need to be overcome. In the WHO Traditional Medicine Strategy 2002-2005 (WHO, 2002) four challenging areas that need to be tackled are highlighted. Those are 1) national policy and regulatory frameworks, 2) safety, efficacy and quality, 3) access and 4) rational use. Please see figure 1 for a more indepth explanation of the contents of each area.

TM/CAM challenges fall into four categories	
National policy and regulatory frameworks	• Lack of official recognition of TM/CAM and TM/CAM providers • TM/CAM not integrated into national health care systems • Lack of regulatory and legal mechanisms • Equitable distribution of benefits of indigenous TM knowledge and products • Inadequate allocation of resources for TM/CAM development and capacity building
Safety, efficacy and quality	• Lack of research methodology • Inadequate evidence-base for TM/CAM therapies and products • Lack of international and national standards for ensuring safety, efficacy and quality control of TM/CAM therapies and products • Lack of adequate regulation and registration of herbal medicines • Lack of registration of TM/CAM providers • Inadequate support for research
Access	• Lack of data measuring access levels and affordability • Need to identify safe and effective therapies and products • Lack of official recognition of role of TM/CAM providers • Lack of cooperation between TM/CAM providers and allopathic practitioners • Unsustainable use of medicinal plant resources
Rational use	• Lack of training for TM/CAM providers and on TM/CAM for allopathic practitioners • Lack of communication between TM/CAM and allopathic practitioners, and between allopathic practitioners and consumers • Lack of information for public on rational use of TM/CAM

Fig. 1. The four focus areas of the WHO Traditional Medicine Strategy 2002-2005. (From: WHO, 2002, p. 20)

In 2008, The WHO Strategy of Traditional Medicine was reinforced by the Beijing Declaration on Traditional Medicine (WHO, 2008a). Both The Traditional Medicine Strategy 2002-2005 and the Beijing Declaration identifies the need for strengthened cooperation and communication between TM/CAM providers and practitioners of Western medicine as one of the focus areas of work in order to increase integration (WHO, 2002, p. 26).

3. AIM OF THE STUDY AND RESEARCH QUESTIONS

3.1. Aim of the study

The aim of the study is to investigate the main forces promoting and obstructing communication and cooperation between practitioners of Ayurvedic, Western and traditional medicine in order to understand how this affects integration[3] of Ayurvedic and Western medicine. To reach this aim I will study the "Outcome oriented, evidence informed Ayurvedic community health promotion program" in Anuradhapura, Sri Lanka.

3.2. Research questions

1. How does the interaction between Ayurvedic doctors, Western doctors and practitioners of traditional medicine work in the Anuradhapura district and how does this express itself? Is there structured integration, cooperation or competition between the practitioners now?

2. What are the attitudes and perceptions towards the "other" medical systems held by the practitioners of Western medicine and Ayurvedic medicine employed withing the "Outcome oriented, evidence informed Ayurvedic community health promotion program in Anuradhapura", as well as practitioners of traditional medicine in the Anuradhapura district?

3. What are the main factors that influence Western doctors, Ayurvedic doctors, traditional medical practitioners and Health Promotion Officers attitudes and perceptions as well as experience, practice of and willingness to communicate and cooperate?

[3] For definition, please see Abbreviations and definitions p. 9.

4. BACKGROUND

In order to understand what affects the relationship between the practitioners of Ayurvedic, traditional and Western medicine in Sri Lanka, I find it important to have an understanding of the historical circumstances that have lead to the present situation. The situation of Sri Lanka is both generally applicable and unique. According to Unschuld (1976, pp. 1-3) medical resources have been transferred between cultures in their mutual contact over many centuries. The transfer of Western medicine to non-Western cultures is a spectacular example of this process, but it is often forgotten that in any culture where Western medicine was brought, indigenous medical practices already existed (ibid). As a result of the transfer of medical resources between cultures, two or more health-care subcultures exist in most societies. This is called health-care pluralism (Helman, 2007, p. 81). Health-care pluralism often results in a competition for resources between the medical subsystems (Unschuld, op cit), as is seen in the case of Sri Lanka. In this chapter I will also shortly explain the fundamental theories of the three medical subsystems as well as the different kinds of practitioners that exist in Sri Lanka. This will provide the reader with an overview that is helpful in order to understand the difficulties that arise when trying to cooperate across professions.

4.1. The Present situation of plural health care systems in Sri Lanka

Sri Lanka is an island situated in the Indian Ocean, with a population of about 20 000 000 people. The WHO Country Cooperation Strategy of Sri Lanka (WHO, 2001) states that compared to other developing countries in the region, Sri Lanka has attained very high health standards. The country is currently facing many new challenges, as demographic, epidemiological and social transitions causes the country to struggle with the double burden of communicable diseases as well as rapidly emerging non-communicable diseases. Cardiovascular and cerebrovascular diseases, cancers, diabetes, alcohol- and substance abuse and chronic kidney disease now account for over 70% of morbidity in the country and pose a challenge which calls for a reform of the primary healthcare model (ibid).

Sri Lanka has a plural medical system where two formally structured systems of medical service exist side by side (Waxler, 1984). The focus in Sri Lanka, as in most developing countries, is on allopathic medicine, though the government has moved strongly to promote the use of indigenous medicine throughout the healthcare system, writes Srinivasan (1995). The indigenous medical system of Ayurveda and the well-established Western-style biomedical health care system are both being provided free of charge by government funded hospitals as well as by private practitioners (Waxler, op cit). Sri Lanka has an extensive network of public health units and hospitals spread across the island, with most of the population living within 5 km of a facility (WHO, 2006). According to WHO (2001), 60–70 percent of the rural population relies on traditional and natural medicine for their primary health care.

4.2. The history of the plural health care systems in Sri Lanka

Sri Lanka has had a plural health care system for centuries, in which Western medicine has coexisted with Ayurvedic and traditional medicine. Ayurveda is a text-based system of medicine that was introduced to Sri Lanka from India about

3000 years ago. The already existing Sri Lankan indigenous medical system, called deshiya chikitsa, was based on similar principles, and for the last 2500 years the two systems have been integrated in practice (Weerasinghe and Fernando, 2011). Today the indigenous medical system of Sri Lanka is called ‘Ayurvedic medicine’, but it is really a mix of Ayurvedic medicine, Muslim Unani medicine and Siddha medicine, along with traditional deshiya chikitsa (Wolffers, 1984, p. 1).

The Western medical system came to Sri Lanka with the Portugese missionaries in 1540, but it was not until the British colonial period in the19th century that it became the dominant state health care system At independence in 1948 the British left behind a network of government sponsored Western medical services, both preventive and curative, throughout most of the country (Waxler, 1984, p. 194). Western medicine was to begin with mainly used in the interest of the British army, while the local population did not receive much of its benefits. Traditional medicine remained its hold over the population, its resilience strengthened by the fact that it was deeply embedded in the Budhist religion (Aresculeratne, 2001, p. 6).

During the second half of the 20th century, nationalist feelings began to spread in Sri Lanka (Kusumaratne, 2005, p. 36). Indigenous medical knowledge was a link to the culture of the past (Arseculeratne, op. cit), and the leaders of the nationalistic movement supported the Ayurvedic physicians to gain influence, power, financial aid and support (Waxler, op. cit). The conceptual framework of the revival of the indigenous medical system in Sri Lanka was derived from the Western medical system. This implied an integrational approach, in which the Ayurvedic profession was “westernized” and thereby gained the opportunity to legitimize itself in the eyes of the government and the public. The traditional methods, favored by purists, remained thriving in the villages with traditionally trained practitioners (ibid).

The Ayurvedic Act No 31 of 1961 institutionalized the traditional medical system. Ayurveda was legitimized and the government gained control of it. The Ayurvedic Act led to registration for Ayurvedic physicians, government control over manufacturing and sale of drugs and disciplinary control of Ayurvedic physicians. Government-funded Ayurvedic hospitals and dispensaries were established, and with those the opportunity for government jobs for Ayurvedic physicians (ibid).

In 1980, a separate Ministry of Indigenous Medicine [MIM] was created to govern the Ayurvedic sector. MIM has cabinet status but is detached from the Ministry of Health [MOH] that governs the Western medical sector (Department of Ayurveda, 2013). According to Wolffers (1988), Sri Lanka is the only country in the world with a Ministry of Indigenous Medicine. The Sri Lankan approach to integration of Western and traditional medicine is what Bodeker (2001) calls a parallel approach; the two medical systems are separated within the national health system.

4.3. Fundamental theories of the medical subsystems of Sri Lanka

According to medical anthropologist Arthur Kleinman, health care systems are *socially organized responses to disease that constitute a special cultural system* (Kleinman, 1980, p 24). In every society with plural health care systems, there is a professional, a folk and a popular sector of health care. Each of the three sectors of health care has its own way of explaining and treating illness, defining who is the healer and who is the patient and how they should interact (Helman, 2007, p 81).

This study is concerned with the professional sector (comprised of the two medical subsystems of Ayurveda and Western medicine) and the folk sector (traditional medicine). The differences between the three medical subsystems will be explained in the following sections.

4.3.1. Western medicine

Western medicine originated from the Greco-Roman medicine and Northern European traditions and is built on the science of anathomy, physiology, biochemistry and the structure-function relationship between cells, tissues and organs. It focuses on diagnosis, treatment and cure for acute illness via potent drugs and surgery (Liang & Champaneria, 2002, p. 159). What we today call Western medicine is the scientific medicine that developed in the Western, industrial countries during the past two centuries (Debas, Laxminarayan & Straus, 2006).

4.3.2. Ayurvedic medicine

The sanskrit word Ayurveda literally means “knowledge of life” (WHO, 2001, p.2). Ayurvedic philosophy is derived from Indian sacred texts dating back to between 1 and 7 centuries AC (Aresculeratne, 2002). According to Ayurvedic philosophy, all objects and living bodies are composed of five basic elements; earth, water, fire, air and sky. Furthermore, it is stated that there is a fundamental harmony between the environment and the individuals, and acting on one influences the other (WHO, 2001, p. 2). The two major objectives of the Ayurvedic medical science is to promote the health of healthy individuals and to cure the diseased. Ayurveda further recognizes the need for a medical system to provide longevity, quality of life and peaceful co-existence with the society and the environment (CERCAM, 2013). In Ayurvedic treatment, the body is seen as a whole, and the ailments of different organs are not treated separately as in Western medicine. Likewise, the action of a drug can not be judged by its separate constituents, since the action of the whole drug is often very different from that of its parts. This means that it is not possible to obtain any information about the medical properties of an Ayurvedic drug through carrying out research in a chemical laboratory (Weragoda, 1980, p. 73). In the Ayurvedic approach to treatment, it is also crucial to understand and determine the *prakurthi* (constitution) of the patient. *Prakurthi* is the outcome of the internal balance of the three *doshas* (balancing forces) *vata*, *pitta* and *kapha* and can be diagnosed through pulse diagnostics. The treatment will vary depending on the patient’s *prakruthi*. Ayurvedic treatments include herbal medicines as well as advice on certain behaviors and dietary regimes (Pilapitiya and Sribaddana, 2013).

4.3.3. Traditional medicine

The traditional medicine of Sri Lanka is called deshiya chikitsa. It is practiced mainly as a tradition, where the knowledge is handed down exclusively from father to son. For this reason, there is a high degree of specialization in certain fields such as fractures, snake poisoning and treatments of burns. Plant and herbal preparations are used for the treatment of diseases, and magico-ritual performances are used for mental afflictions (Weragoda, 1980). The traditional medicine is not based on any theoretical fundamentals, but resembles Ayurveda (Dr Pilapitiya, personal communication, February 2013).

4.4. The different practitioners of medicine and their educational systems

There is a variety of medical practitioners existing in Sri Lanka, making the integration of Ayurveda and Western medicine an even more complex topic. This section will provide the reader with an overview of the different practitioners of the medical subsystems of Ayurveda, traditional medicine and Western medicine.

4.4.1. Registered practitioners of Ayurveda

In Sri Lanka, there are three ways to become a registered practitioner of Ayurveda (Kusumaratne, 2005, pp. 51-56):

1. There are three staterun colleges of Ayurveda in Sri Lanka. Students are recruited following the procedure of normal university admission and the entrants are those who have been taught Western science in high school (Arseculeratne, 2002). The education includes a four year theoretical/clinical course in Ayurvedic and Western medicine, plus one year internship in a government Ayurvedic hospital (Waxler, 1984, p. 196). The graduates of these ayurvedic universities hold a DAMS (Diploma of Ayurvedic Medicine and Surgery) (Kusumaratne, 2005) and belong to the professional sector of health care.

2. For students of private Ayurvedic colleges and individual practitioners, there are examinations arranged annually by the Department of Ayurveda and the Ayurvedic Medical Council[4]. Succesfull students recieve a Diploma in Ayurveda (DA) (ibid, p. 55) and are part of the professional sector of health care.

3. Practitioners who have undergone apprenticeship with a registered practitioner for a period of ten years have to face an oral examination, whereas those who have only been apprentices for five years undergo the oral examination as well as a written examination. Upon showing sufficient knowledge, experience and skills in indegenous medical knowledge the applicant becomes a registered practitioner of Ayurveda (Ibid, p. 54) and is part of the folk sector of the health care system.

4.4.2. Non-registered practitioners of Ayurveda

Besides the registered practitioners of Ayurveda, there is a large number of non-registered practitioners of traditional medicine who have received their training as apprentices to practitioners of traditional medicine. Their contribution is significant (ibid, p. 57), but their practice is illegal according tho the Ayurveda Act No 31 of 1961, part VII section 72 (Parliament of Ceylon, 1961).

4.4.3. Practitioners of Western medicine

To become a licensed physician by the Sri Lanka Medical Council, the students have to undergo 4,5 years of training at one of the eight medical universities, followed by one year internship. The degree recieved is MBBS (Bachelor of

[4] Department of Ayurveda and Ayurvedic Medical Council are two departments under the Ministry of Indigenous Medicine, concerned with planning of Ayurvedic education and registration of Ayurvedic practitioners respectively.

Medicine, Bachelor of Surgery) (Wikipedia, 2013).

4.4.4. Clarification of terminology used in the report regarding the different practitioners

The terminology of Ayurvedic practitioners can be a bit confusing, since a registered practitioner of Ayurveda can be either an Ayurvedic doctor belonging to the professional sector, or a practitioner of traditional medicine belonging to the folk sector. In order not to confuse the reader of the report, I have chosen the following terminology when writing about the different practitioners of Ayurvedic medicine:

Ayurvedic practitioner or *Ayurvedic doctor* is used for practitioners of the professional sector. It includes those who have graduated from an Ayurvedic university, that is, those who hold a DAMS degree, and holders of DA. The CMOs in the Ayurvedic Community Health Promotion Program all have a DAMS degree.

Practitioner of traditional medicine (TMP) is the term used for practitioners of traditional medicine who belong to the folk sector and have recieved their knowledge as apprentices. They can be both registered (following the 3:rd criteria for registered ayurvedic practitioners) or non-registered.

Western doctors is the term used for biomedical doctors holding at least a MBBS.

5. THE FOCUS OF THE STUDY: A PILOT PROJECT IN SRI LANKA AIMING TO INTEGRATE AYURVEDIC AND WESTERN MEDICINE

Since the aim of the study is to understand what affects the cooperation between the practitioners of Ayurveda, Western and traditional medicine and how this affects integration, it was valuable to study a project working on exactly these two things. By studying the parts you get a glimpse of the whole, which means that through studying this specific project I was both able to understand the situation in Sri Lanka as well as understanding what is of importance for cooperation and integration in a specific project.

5.1. The Ayurvedic Community Health Promotion Program in Anuradhapura

To fully utilize the health promotion potential of Ayurveda, the Ministry of Indigenous Medicine in Sri Lanka [MIM] started up a unique project in which Ayurvedic medicine is being used for health promotion and primary healthcare (MIM, 2012). The program is called Ayurvedic Community Health Promotion Program [CHPP] and was inaugurated in 2002 in Anuradhapura District in the North Central Region of Sri Lanka.

Fig. 2: The study was conducted in Anuradhapura district in the North Central Region of Sri Lanka. (From: Maps of the world, 2013).

The program is lead by a director, and employs 22 Ayurvedic doctors working as Community Medical Officers [CMO] and 210 Health Promotion Officers [HPO] helping the CMOs to carry out their work. The CMOs hold a Bachelor of Ayurvedic Medicine and Surgery [BAMS] degree from one of the three Ayurvedic universities while the HPOs are locals who have completed A-level (grade 13) (personal communication, Dr Amali Perera, February 2013). The HPOs have recieved some basic training from the MIM to carry out their tasks within the program, but there has so far not been any consistent training program for the HPOs (personal communication, Dr Senaka Pilapitiya, February 2013).

The CHPP runs a number of interventions in the Anuradhapura district. The interventions focus on health promotion regarding child malnutrition, NCDs, ayurvedic home remedies, healthy pregnancy, geriatric clinics and ecological farming. The interventions consist mainly of awareness programs where Ayurvedic knowledge regarding the different topics is taught, for example through practical cooking-classes and lectures (MIM, 2012). As an example of one of the programs within the CHPP, the "Under-5-years-program" can be mentioned. Witin the program, the young children are weighed and measured. Additionally the mothers are taught how to prepare nutritious food for their children according to Ayurvedic tradition, as well as how to prepare simple Ayurvedic home remedies (Dr Amali Perera, personal communication, January 2013). Mobile field clinics are carried out in remote villages, providing consultations and Ayurvedic medicine for the villagers as well as screening for diabetes and chronic kidney disease [CKD] (MIM, 2012).

Although the program has been implemented for 11 years there has not been any proper survey or research done regarding the results of the project. Hence, they have not been able to show whether the program is effective or not. When the Ministry of Indigenous Medicine in 2012 wanted to know the results of the

program, in order to allocate further funds for it, the director of the CHPP contacted the Centre for Education and Research on Complementary and Alternative Medicine at Rajarata University in Anuradhapura to help them plan and set up an outcome oriented research for the program (Dr Senaka Pilapitya, personal communication, January 2012).

5.2. Centre for Education and Research in Complementary and Alternative Medicine (CERCAM)

Centre for Education and Research in Complementary and Alternative Medicine [CERCAM] was recently established by Dr Senaka Pilapitiya at the Faculty of Medicine and Allied Sciences at Rajarata University of Sri Lanka in Anuradhapura. CERCAM is the first such center in a medical faculty in Sri Lanka. Dr Pilapitiya is the director of the center and is educated as a Western medical doctor and holds a Diploma in Ayurveda. The aim of CERCAM is to elevate Ayurveda to its proper position through education of Ayurvedic practitioners and Western doctors as well as through research on Ayurvedic and integrative medicine (Personal communication, Dr Pilapitiya, February 2013).

5.3. The outcome oriented, evidence informed Ayurvedic Community Health Promotion Program in Anuradhapura

CERCAM, in cooperation with the CHPP, have established the "Outcome oriented, evidence informed Ayurvedic Community Health Promotion Program in Auradhapura". This will be a three-year collaborative program with a multidisciplinary expertise. The goal of the collaboration is to produce scientific research on the outcomes of the interventions of the CHPP, in order to enhance the validity and utility of Ayurveda as an effective community health promotion system. The further aim is to act as a platform for integrated medicine at a community health promotion level, especially when it comes to NCDs and geriatric care. The main focus is on Ayurvedic medicine, although other types of indigenous medicine will be included (CERCAM, 2012).

During the first year of the program, the main focus will be on assisting the CMOs to improve their methodological skills of designing community based studies as well as to provide basic training on Ayurvedic health promotion for the HPOs.
The CHPP will be running as usual, in order to be able to evaluate the effects of it on community level. In other words, the Ayurvedic doctors will continue to carry out their work, while the Western doctors come in as consultants and share their knowledge on public health management and scientific research with the Ayurvedic doctors. In this way the Ayurvedic doctors will be equipped with tools to make their work more effective and be able to carry out the planned research projects.

In parallel, there will be a range of other activities carried out, such as;

- Mapping of all providers of traditional medicine in Anuradhapura district.
- Determining community needs and health care seeking behavior for CAM use.
- Cross sectional study to estimate disease burden of chronic renal failure, snake-bites and diabetes.
- 5 interventional studies covering 5 of the intervention programs within the community program. (Health of elderly, childhood nutrition, healthy lifestyle among school children, psychological wellbeing of pregnant women, prevention of selected NCDs)

• Establishment of community clinics with hospital–community referral system to have continuity of care and community based care.
• To initiate a pilot program for integrated approach for community health promotion in selected health problems.

6. PREVIOUS RESEARCH

Previous medical anthropological research in Sri Lanka has mainly focused on how the people choose health care in a pluralistic society, or how the practitioners of the traditional medical subsystems react to the modernization of society (See Wolffers, 1988 and 1989; Weerasinghe & Fernando, 2011; Sachs, 1989). Reading those articles provided me with a background knowledge of the situation in Sri Lanka before going there, and offer interesting insights into the subject of integration and cooperation between the medical traditions. Waxler's (1984) research on the reasons for the coexistence of Ayurveda and Western medicine highlights the interesting question of why the two systems exist side by side. Do they continue to exist because they offer their patient´s something unique, or do they mainly exist because they are linked to different political and economic interests? To provide further insights into the complications of integrating traditional medicine in the primary health care, I have included Wolffers' (1990) overview of ways in which to incorporate TM in primary health care and what the effects of this can be.

6.1. An institutional explanation for the coexistence of Ayurveda and Western medicine in Sri Lanka

Waxler (1984) argues, through the findings of her research, that the reason for the existence of plural medical systems in Sri Lanka is not, contrary to common perception, that physicians of different medical subsystems provide treatment for different problems, nor that patients select them for that reason (a functional explanation). Instead, Waxler suggest that an institutional argument is more valid to explain why Ayurveda and Western medicine continue to coexist in Sri Lanka. The institutional argument implies that "plural medical systems exist because they as institutions are linked to larger political and economic structures of the society, and that they thus provide unique social and economic benefits to the physicians themselves". The institutional explanation suggests that each system of medicine provides upward mobility for different segments of Sri Lankan society. Waxler points out that Ayurveda and Western medicine has divided territory and do not compete for the same patients nor the same jobs. The division of territory can be seen by the fact that Western doctors work in the urban areas and in the government sector while Ayurvedic doctors mainly run private practices and work in the rural areas. Besides, biomedical education is often held in English, limiting the opportunities for people from rural areas to be admitted since they in general are not fluent in English. Ayurvedic education, on the other hand, is held in the traditional languages Singhala or Tamil. Waxler draws the conclusion that the division of territory and jobs is to the satisfaction of both parts, and has in fact been a way for Ayurveda to sustain itself as a separate system providing economic and social opportunities for a part of society that has little access to high-status medical training (ibid).

6.2. Traditional medical practitioners adaptiation to modern society

Wolffers (1989) research in Sri Lanka has shown that due to changing expectations and demands of patients, TMPs have adapted their methods of working. Some TMPs incorporate techniques from biomedicine into their practice and thus compete with biomedical facilities, while others stress the differences with Western medicine, thus denigrating biomedicine and improving their own image. Yet another way is to concentrate on the demands of the patients that are not well catered for by Western doctors. A fourth way is to become a mediator between the traditional and the modern cultures, referring some patients to biomedicine while treating those with mental problems themselves (ibid).

6.3. How the people of Sri Lanka utlize the plural health-care system

Ivan Wolffers research in two Singhalese communities (Wolffers, 1988) showed that the Sri Lankan people use Western medicine for acute complaints or when a child is seriously ill. For common complaints home-remedies or Ayurvedic practitioners are consulted, wheras for chronic problems some turn to Ayurveda while others turn to Western medicine (ibid.). Bodeker (2002) writes that people living in societies with plural medical systems practice integrated care irrespective of wheter integration is officially present or not. In a later text, Wolffers (1990, p. 14) arrives at the same conclusion when it comes to the people of Sri Lanka.

6.4. The role of traditional medicine in primary health care

Primary health care [PHC] is the first level of health care which is directly accessible to individuals and communities (Naidoo and Wills, 2009, p. 122). Wolffers (1990) writes, that some of the arguments in favour of the incorporation of TM into primary health care are that TM is a culturally acceptable, affordable and accessible form of health care, with practitioners already present where manpower is needed the most. Those against incorporation point at the possible dangers of traditional medicine, due to TM not having a built-in correction mechanism. An important fact that Wolffers points out (ibid, p. 9), is that when discussing the role of traditional medicine in PHC it is important to be aware of the fact that traditional medicine and practitioners of traditional medicine are not a homogenous concept or group. Incorporation of traditional medicine in PHC has shown to give personal advantages for TMPs such as increased status and possibility to charge reasonable fees. On the other hand, the necessary adaptation to Western medicine can lead to a disapperance of the tradition (ibid).

Wolffers (ibid, pp. 10-13) suggests three ways in which to involve traditional medicine in a primary health care program.

1. By knowing and understanding traditional medical concepts in order to be better able to influence a population to change its behaviour.
2. By selecting certain remedies from the materia medica of the indigenous tradition and adopting them in the public health care program.
3. By integrating some of the manpower of traditional medicine in a public health care program (ibid).

7. METHODOLOGICAL CONSIDERATIONS

7.1. A qualitative approach

The idea for the field study came out of my interest in medical anthropology, a branch of cultural anthropology with roots in medicine and natural sciences. (Helman, 2007, p. 7). The aim of this study is to understand the main forces promoting and obstructing integration of Ayurveda and Western medicine, through studying the attitudes, perceptions and behaviours, and the factors influencing those, among practitioners of Ayurveda and Western medicine. Attitudes and perceptions are best studied through a qualitative approach. Actually, according to Hartman (1998, p. 239) the very aim of qualitative research is to understand the lifeworld of an individual or a group of individuals.

One of the most commonly used research approaches in medical anthropology is participatory observation for at least one year (Helman, op cit, p. 16). Since I was only able to spend three months in Sri Lanka, I decided on combining the three qualitative methods of participatory observation, semi-structured interviews and document analysis. Helman (op cit, p. 463) suggests using triangulation when conducting an anthropological study. Triangulation means that the same phenomena is studied using different research techniques. It is a way of maximizing the chances of validity, since an agreement or overlap between the findings from different research techniques implies significant findings (ibid). Through the use of the qualitative methods of participatory observation, semi-structured interviews, one focus group discussion and the study of documents, I have strived to reach the aim of triangulation.

The aim of the study two-folded: to describe the factors influencing the practitioners as well as to explain how these factors influence their mutual communiction, cooperation and integration. The three methods of data gathering provides a background knowledge of the lifeworld of the informants, from which explanations for their behaviour can be deducted. Gilje and Grimen (2007) writes that explanations of social phenomena can be causal, purposive or functional in nature. A causal explanation explains a behaviour of a person as being governed by underlying factors such as early life events or social settings. A functional explanation on the other hand, explains the continuation of a phenomena, such as gender roles, to be based on it filling a positive function, consiously or unconsiously, for a group of people or a society. Explaining a behaviour by refering to a persons purpose of the behaviour, is called purposive explanation. In social sciences, purposive and causal explanations often interact, as they can explain different sides of the same social process (ibid, p. 142- 153).

7.2. Gathering and analysis of data

Before going to Sri Lanka, a comprehensive literature search was conducted in order to have a thorough background knowledge on the situation of plural health care systems in the country. A semi-structured interview guide was used for the interviews (see attachment 1). The interview guide was developed inspired by Kvale (1997, pp. 117-133) and adjusted accordingly to suit practitioners of the different medical subsystems. Five interviews lasting one and a half hour was carried out with Ayurvedic CMOs. Three Western doctors were interviewed during several occassions. In total about one and a half to three hours were spent

interviewing each Western doctor. One focus group discussion with seven HPOs was carried out. Short interviews with six TMPs, each interview lasting about half an hour were also conducted as well as a group interview with a rural family and a fifteen minute interview with the director of the CHPP. The aim was to conduct as many interviews as needed in order to reach saturation of information (Hartman, 2004) during the given time limits.

Participatory observation was carried out in field clinics with CMOs, at the hospital during a ward round, at the offices of the CHPP and the hospital, during meetings, in an Ayurvedic government hospital and with a rural family. The observations were carried out during 7 weeks, a few hours every day. It was an invaluable source of information, providing opportunities to observe practitioners conducting consultations with clients. It also gave plenty of occasions to talk in an informal way with key informants, about things in need of clarification. The level of involvement in the participatory observation carried out, can be labeled according to Spradley's (1980) categorization as passive or moderate participation. Passive participatory observation means the researcher only has a bystander role, while in moderate participation the researcher maintains a balance between "insider" and "outsider" roles. The previous limits the researchers ability to be immersed in the field, while the latter gives a good combination of involvement as well as a necessary detachment to be objective (Spradley, 1980, pp. 58-62).

All interviews were recorded with a digital voice recorder. Transcribation was carried out both in Sri Lanka and in Sweden. The resulting textual data was analysed according to thematic analysis, a method for identifying, analyzing and reporting patterns, so called themes, within data (Braun & Clarke, 2006, p. 79). Coding of data was done through identifying pieces of data in interviews that were relevant in relation to the research questions. Coding was mainly driven by a theoretical approach, in which background knowledge and the chosen theory were guiding the selection of codes. The codes were sorted into themes that reflected important patterns withing the data. The initial themes were then analysed further and rearranged into new themes reflecting more general themes within the dataset.

7.3. Selection of informants

Since the focus of the study was the "Outcome oriented, evidence informed Ayurvedic Community Health Promotion Program in Anuradhapura" all informants had to be involved in the program. This was true for all informants except for the TMPs, who had not yet been involved in the project and hence had to be recruited by other means. My initial contact and key informant was the Western doctor who is the director of CERCAM. He then introduced me to the director of the CHPP and some of the CMOs working there. This guided my selection of informants.

At first I had planned to interview only the Ayurvedic and Western doctors, but as my understanding of the program increased, I decided to also go for a focus group discussion with the HPOs and short interviews with TMPs in order to get the full picture. The choice of Western doctors was easy, since there were only three doctors involved. I was able to interview all of them. When it came to the CMOs, I had one key informant among them, who in turn presented me to other CMO's whom I interviewed. With the help of my CMO key informant I was also able to conduct a focus groups discussion with seven HPOs, and the HPOs in turn helped me arrange meeting with some of the TMPs they knew. Due to time constraints, the

interviews and my time spent with the TMPs were much shorter than with the other informants and thus gave less depth to my understanding of their situation. For the purpose of the study I found it to be okay, since the main focus was on the practitioners involved in the collaboration program.

7.4. Ethical considerations

7.4.1. Informed consent

All informants were informed about my background and the aim of the study. They were informed they would remain anonymous and that what they said would be confidential. Informants were asked for verbal informed consent, since I felt, like Helman points out (2007, p. 465), that signing a paper would seem to official and maybe even threatening. Most informants seemed comfortable with the digital voice recorder.

7.4.2. Ethical issues regarding consequences and confidentiality

Ethical issues to considder when conducting a study are, according to Helman (2007, p. 465), 1) possible benefits for the research subjects and communities, 2) psychological effects for informants, 3) if and how the findings will be fed back to the community and 4) whether the results could be exploited. Regarding the first and the third point, the collaboration project studied already has benefitted from the study (see 7.5.4.), and further findings of this report will be communicated to all parties involved. The research questions as such were not sensitive in nature, hence the question of psychological effects of the informants should not be a problem. Of greater concern is whether the results could be exploited or misused by others. The subject is linked to political issues that could be sensitive in a country like Sri Lanka. The study is also limited to an easily identifiable project, highlighting the issue of confidentiality (Kvale, 1997, pp. 109-110). I got into the typical question of how to report my findings in a way that would both protect confidentiality and informants and at the same time give a correct scientific analysis of the results of the study.

7.5. Methodological discussion

This chapter is a review of encountered difficulties and how they were solved.

7.5.1. Getting access to interviewing and finding a good place to conduct interviews

Due to the informants being extremely busy with work and family life, it was quite hard to arrange proper interviews with them. Another aspect was that complicated the arrangement of interviews was the intercultural relationship to time, where my Swedish manner of “being on time” met the Sri Lankan manner of “never being in time” and created practical delays as well as frustration and confusion on my behalf. A third difficulty was to get the prospect informants to understand the concept of “interview” and why I wanted to talk with them for one to one and a half hours. All of the three mentioned aspects taken together resulted in some of the interviews being “informal interviews” in the form of ongoing conversations during several meetings. This was much the case with the interviews of Western doctors, except for one of them. The interviews with the Western doctors were carried out in the office at the hospital, in the informants homes or when travelling.

All five interviews with CMOs were proper interviews, lasting between one and two hours. It was hard to find a good place to conduct the interviews. The only options, beside the office of the CHPP, would be to conduct them in my apartment or in their homes. I found that conducting interviews at home would feel too personal to be relaxed, as mentioned by Trost (2010, p. 65). Finally, all interviews with CMOs were conducted in the office of the CHPP, as it was the most natural and relaxed place. The office facilities were rather limited. During all but one of the interviews the program director was present in the room, busy with her work. I regarded this as not being a big issue due to three factors; the director was not fluent in English and probably did not understand most of the interviews since they were held in English; the informants seemed very relaxed and comfortable with her being there; the Sri Lankan culture is very social and it seems natural to always have people around. It simply felt more unnatural to withdraw to the kitchen (the only available room in the office where we would be undisturbed) than it did to remain in the main office. Conducting the interviews in this manner does not follow good practice regarding choice of place for an interview, but due to the before mentioned aspects I found this to be the best option anyway.

7.5.2. A problem of language and cultural misunderstandings

Interviews with Western doctors and Ayurvedic CMOs were conducted in English. The western doctors were fluent in English and able to express themselves very precisely. The level of spoken English was a bit lower for the CMOs, but they were all willing and able to conduct the interviews in English, though they sometimes were struggling to find the right words. Another level of complication when it came to interviewing CMOs, was the Sri Lankan culture of saying “yes” rather than “I don´t understand”. This created some confusion on what they really meant, which I tried to solve during the interviews but not always successfully managed to do. These two complications most certainly mean that the information received from the CMOs was not as rich in detail and complexity as the information from the Western doctors. This circumstance could bias the results of the study. Even though some CMOs found it a bit challenging to speak English, I found it better to conduct the interviews in English rather than using a translator. Having a translator adds further complications to the interview, which will be mentioned in the following section.

7.5.3. Using a translator

For the interviews with TMPs and for the FGD with the HPOs, I used a translator. For the FGD the translator was my key informant CMO, since this was the only available English speaking person present when the possibility for the FGD appeared. She was the boss of the HPOs, but since her relationship to them was very good, and the topics discussed were not sensitive, I found it worked well to do it this way. For the interviews with TMPs I used another translator. I thought the translator should be a person outside of the medical systems of Ayurveda and Western medicine, since his or her presence otherwise would affect the answers given by the other medical practitioners. My translator was a local young man I got to know at a guesthouse I stayed in. He had been working abroad, was fluent enough in English and had a very a good knowledge of the different medical subsystems and practitioners existing in the society. He was a social person who easily blended with different kinds of people and who was readily accepted by the

informants. This was the first time I conducted interviews with a translator, and some unforeseen problems appeared. The translator had a tendency to interpret the answers according to his own points of view instead of telling me exactly what the informant had told him. We had a discussion about this, and he improved. Another unforeseen problem was that the translator was not able to translate some of the concepts I was interested in from English to Singhala. I had to find out the translation of these concepts from my key informant and then inform my translator. Since the interviews with TMPs were conducted during three consecutive days, about half of the interviews were conducted without the translator understanding these concepts. This unfortunately meant a loss of important information.

7.5.4. Being a "culture broker"

Recieving information about the collaboration project from the different professional groups, both through participatory observation and interviews, made me able to view it from a variety of perspectives. The ability to go back and forth between the groups enabled me to verify my observations on both sides, and eventually lead to me acting as a "*culture broker,*" *mediating between the needs of the local communities and those of the health care system* (Helman, 2007, p. 444). During field visits, interviews and informal talks, a misunderstanding between CERCAM and CHPP regarding the data collection for an important survey was detected. The misundertadning had been going on unnoticed for a while, and would eventually have resulted in inaccurate data if not discovered. I will come back to this in chapter 9, Analysis of data.

7.6. Concluding remarks on methodological issues

The whole process of the study has been a hermeneutic spiral of learning. The attention was constantly shifting between the parts and the whole, constantly reinterpreting the information (Hartman, 1998). Data gathered through interviews and participatory observation constantly gave me new insights and new questions that I would test in the next interview. Besides increased knowledge on *what* to ask, I was constantly developing my way of *how* to ask questions during interviews. I noticed in myself a tendency to ask leading questions, and during transcribation I heard that this influenced the informant´s answers in some of the interviews. The leading questions, along with language problems and things lost in translation, decreases the reliability of my data. It can be discussed if saturation of data was reached. The interviews with CMOs all gave quite similar answers, why I found five interviews to be enough and reaching saturation. Regarding the Wester doctors there were only three doctors involved in the project, so it was not possible to get more informants. The interviews with TMPs definitely did not reach saturation of data, since they were too short and the group is very diverse.

The validity of the study is hopefully rather good since I used triangulation. I used to doublecheck findings from documents, participatory information and interviews with my key informants and other interviewees as a way to check if I had understood things correctly and to get more views on the subject.

8. THE THEORY OF STRUCTURED COMPETITION, COOPERATION AND INTEGRATION

Paul Unschuld's (1976) theory on structured competition, cooperation and integration is an attempt to conceptualize the dimensions at play, as well as the difficulties that arise, when trying to integrate different medical subsystems into one health care delivery system. I found this theory to be a very interesting framework that enabled me to understand what is going on behind the scenes and why integration is so complicated.

Unschuld (1976, p. 2) defines a medical system in a given culture as the patterns of distribution of medical resources in that particular culture. Medical resources are divided in primary and secondary medical resources. Primary medical resources are; 1) medical knowledge concerning causation, character and prevention of disease, 2) drugs and healing techniques, 3) medical equipment and facilities. Secondary medical resources are the material and immaterial rewards gained through the medical practice. The medical system of a country can be comprised of two or more medical subsystems with different concepts of medical knowledge. The medical subsystems can be highly conceptualized systems such as Ayurveda and Western medicine or pragmatic medical systems lacking theoretical justification, such as many types of folk medicine.

In any country with plural medical systems there will be a dynamic process of competition for control and possession of medical resources, especially secondary resources. The coexistence of medical subsystems can either be *non-structured* or *structured*, that is, the practitioners of the different subsystems are either unregulated or regulated by policies. When aiming to achieve structured coexistence, Unschuld points out that one has to take into account what he calls the four dimensions of a medical subsystem (ibid). These are, in order of their increasing resistance to structured coexistence, *drugs, healing techniques, manpower and concepts*.

For the dimension of drugs, history shows numerous examples of Western medicine utilizing drugs from traditional non-Western medical systems, as well as practitioners of traditional medicine prescribing Western drugs. The same is true for healing techniques, where for example acupuncture has been incorporated into the practice of many Western medical practitioners.
When it comes to the level of manpower, it has often been the case that practitioners of traditional medicine in developing countries have been ignored or heavily regulated, even though they have by far outnumbered the Western trained personnel.

The most difficult dimension of medical subsystems to integrate is concepts. It would for example be very difficult to bring together two as elaborate and seemingly incommensurable theories such as Ayurveda and Western medicine.

To reach a state of structured coexistence is challenging, since the practitioners of different medical subsystems are competitors for the same secondary medical

resources available in society. They utilize primary medical resources that are different in some aspects and similar in others, but it is extremely difficult to have these groups work together and share the resources available, except under coercion and close government supervision. It seems easier though to shift primary resources from one group to the other, once the second group has recognized that this will mean gaining access to more secondary resources. Structured coexistence can exist in three levels; competition, cooperation or integration (ibid).

Structured competition implies that two or more medical subsystems are legally regulated and supervised, and compete for the same secondary medical resources in society. Structured competition can exist on all levels of medical subsystems. Different medical subsystems are not equally suited to cope effectively with the totality of health problems of the population. Due to the competition over secondary resources, practitioners are not inclined to admit weaknesses in their own primary medical resources. Patients who have resorted to a medical subsystem that can´t provide them effective help will loose time before resorting to the other medical subsystem.

Structured cooperation between different medical subsystems relying on different primary resources is operationalized through a formal referral system in both directions, where practitioners may or may not work in the same location, treating the same patient at the same time. For a situation of structured cooperation to occur, there must be no competition for secondary resources and practitioners must have been educated to clearly recognize the possibilities and boundaries of their own and the other medical subsystem and act accordingly.

Structured integration is the highest form of structured coexistence. Where it is achieved one can not speak of distinct medical subsystems any more. Integrating drugs and healing techniques is the easiest part, once the manpower groups have recognized the gain of secondary resources by doing so. Integration of manpower groups is more complicated, since one has to ask who integrates whom. What has often been meant by integration is the subordination of one medical manpower group to another. Structured integration, on the other hand, would mean that all relevant primary medical resources are equally accessible to the previously different manpower groups. When it comes to the integration of the dimension of medical paradigms, it is both a question of mutual compatibility as well as a question of how closely related the underlying medical concepts are to practice (ibid).

9. ANALYSIS OF RESULTS

The analysis of results is structured into five main themes: Politics: Rules and regulations meet culture and practice; Practitioners: Shaped by society shaping society; The people of Sri Lanka: Integration on grass root level; Mixing versus integration; and Capacity building for integration.

9.1. Politics: Rules and regulations meet culture and practice

This section will describe the general political background as well as the regulations of practitioners of the different medical susbsytems. I then go on to present findings on how these regualtions are observed and perceived by the practitioners.

9.1.1. Two parallel systems of health care

When studying documents from the different medical sectors, it becomes apparent that different values govern the Ayurvedic and the Western sectors of health care. Upon reading documents from MIM (Budget Proposal 2013 and website), historical, cultural and nationalistic values, rather than scientific or medical proofs, dominate the arguments in favour of promoting indigenous medicine. An example of this is the message of the Deputy Minister of Indigenous Medicine (MIM, 2013).

> *The future of the country has been stepping in to darkness with the inheritance of an unhealthy generation which has declined in every aspect as a result of consuming poisonous food imported from foreign countries. However, a new era, which sharpens the nation pride, has dawned under the leadership of H.E. the President Mahinda Rajapaksa, who put an end to the brutal separatist terrorism prevailed in the country for three decades. As a result the people have gained new enthusiasm and transforming in to our unique values. This current tendency has astonished not only our people but also the foreigners. /.../ This Ayurveda system is the best way to continue with our traditional values. It has been easy to carve this in to the minds of people as it has survived from modernization from generation to generation.*

The mission statements of the two health ministries also reflect the differences in approach. While MOH have a focus to achieve highest attainable health standards, MIM has a focus to secure the Sri Lankan identity.

> Mission statement of Ministry of Health
> *To contribute to social and economic development of Sri Lanka by achieving the highest attainable health status through promotive, preventive, curative and rehabilitative services of high quality made available and accessible to people of Sri Lanka.*
>
> Mission statement of Ministry of Indigenous Medicine
> *Make the entire community to contribute for the achievement of national, economic and millennium goals through the healthy development of human competencies with the use of research and modern technology while securing the Sri Lankan identity.*

From interviews it was understood that all officials in MOH have a background in Western medicine, whereas the officials in MIM are civil servants who do not have a background in Ayurveda or Western medicine. The lack of Ayurvedic knowledge among the officials in MIM was regarded as a problem by most informants.

Documents from the World Health Organization, such as the WHO Country Cooperation Strategy 2006-2011, do not even mention the existence of MIM and the network of Ayurvedic government hospitals and dispensaries spread across the island. Although WHO calls for a reform of the primary health care model in Sri Lanka (WHO, 2006) there seem to be no cooperation with the Ayurvedic sector.

9.1.2. Economic situation for Western and Ayurvedic medicine

In the Budget Speach of 2013 (p. 41-42), 125 billion (125. 000 000 000) rupies are allocated for the provision of health services while the Ayurvedic sector will recieve 300 million (300. 000 000) rupies to encourage research that will help

expand the indigenous health facilities regarding prevention of NCD´s and elderly care. This shows how the economic resources are in favour of the Western sector.

9.1.3. Regulation of Ayurvedic practitioners

The main document regulating Ayurvedic practitioners is the Ayurvedic Act No 31 of 1961 (Parliament of Ceylon, 1961). This document is described by informants as being old and in need of modification. Nevertheless, it is still what regulates the practice of Ayurvedic medicine in Sri Lanka. The paragraphs most interesting for this study are presented in short here.

In part III, chapter 18, The Ayurvedic Act gives The Ayurvedic Medical Council the authority to be responsible for the registration of persons as Ayurvedic practitioners, as well as the regulation and control of their professional conduct. Part VII chapter 55 states who is legible to be a registered practitioner of Ayurveda (please see chapter 1.1.2. for details).

In Part VII chapter 72 it is said that "anyone who is not a registered Ayurvedic practitioner and practices for gain Ayurvedic medicine and surgery shall be guilty of offense". The Ayurvedic Act further dictates that any registered practitioner of Ayurveda who manufactures, sells, supplies, distributes or dispenses poison, opium or dangerous drugs is guilty of an offence (Part VIII, chapter 77).

In the next sections it will be described how these regulations are followed in practice.

9.1.4. Unregistered TMPs exist – despite being illegal

Despite the regulations there are plenty of active non-registered practitioners of traditional medicine all over Sri Lanka. In fact, according to the preliminary results of a survey recently conducted by CERCAM and CHPP, out of 1100 practitioners of traditional medicine in Anuradhapura district, more than 700 are non-registered. Most of the informants think that TMPs should be registered, but, contrary to what one might believe, registration does not seem to be experienced as a guarantee of quality. During the focus group discussion with the HPOs the following statement was made:

> *"Most of the traditional healers who are practicing well, that means who are giving good treatments for the community, are not registered for the Ayurvedic Medical Council.../.../... According to our rule they have to get registration, but they don´t think about that because they are real practitioners."*
>
> *(HPO)*

Regulation and registration of practitioners is a complicated matter. As one of the Western doctors said *"Unregistered TMPs do exist in the community, whether the government likes it or not. The question one has to ask is if those unregistered practitioners should be seen as a problem or as a resource".* This is one of the main points of the Collaboration program between CERCAM and CHPP, and an important question regarding how to integrate TMPs in the primary health care of Sri Lanka.

9.1.5. The Ayurvedic sector is perceived as unstructured
A recurring theme among the Western doctors, was the notion of the Ayurvedic sector being unstructured, lacking regulation and quality control of practitioners and medicines. It was argued that unlike the Western medical sector, the Ayurvedic sector does not have a central regulatory body or a system of self regulation. A problem that was said to be a result of this lack of regulation was the existence of Ayurvedic practitioners prescribing Western drugs. The main point of the Western doctors was that since there is no self-regulatation and no point to refer a complaint to, it is difficult to come to terms with the problem.

9.1.6. Regulation of Western doctors
Western doctors are manily regulated by the indepedent body of the Sri Lanka Medical Association (SLMA). In the SLMA Code of Conduct for members, one of the professional improprieties mentioned is ”Improper Delegation Of Medical Duties”:

> *A doctor is responsible for the management of his patients. Any doctor who improperly delegates functions requiring medical knowledge and skills to a person who is not a registered medical practitioner, registered under the SLMC, is liable to disciplinary proceedings. (SLMA, 2013).*

This implies that it is improper for Western doctors to delegate patients to Ayurvedic practitioners, whether they are registered or non-registered.
The Western doctors are also affected by the Ayurveda Act No 31 of 1961, to not be legitimate to practice Ayurveda, if they are not also registered as Ayurvedic practitioners.

9.1.7. Inoffical referrals are made by Western doctors
The SLMA Code of Conduct seems to limit the Western doctors possibilities to refer their patients to Ayuredic doctors, but in clinical reality this is adapted by the individual practitioner to fit his or her knowledge and beliefs. Discussing the matter with the Western doctors, it became clear that referrals to Ayurvedic doctors are made, unofficially and without referral notes. An argument for not writing referral notes is that Western and Ayurvedic diagnosis and labelling of the patients disease is completely different and are therefore not necessary since they do not give much information to the practitioners of the other medical system. Upon asking one doctors about the impact of the SLMA Code of Conduct, he said ”*If a patient is not benefitting from Western medicine they can´t say ”Don´t refer to Ayruveda”. It is patients choice, not the SLMA*.”

9.2. Practitioners of medicine: Shaped by society - shaping society
This chapter will present factors that influence choices, attidudes, behaviours and perceptions of the practitioners of Western, Ayurvedic and traditional medicine.

9.2.1. The impact of family background on the choice of work and attitudes towards the other medical systems
Most of the CMOs and the Western doctors interviewed come from families where the mother has been a housewife and the father a civil servant. For them, the decision to become a Western doctor or an Ayurvedic doctor seem to have been more dependant on their grades than on family background. Those who have the

highest scores in A-level test all go to study Western medicine, whereas those with lower scores go for Ayurveda. Thus, educational system has had a greater influence on choice of working as a Western or Ayurvedic doctor than family background for all informants.

Two out of five interviewed CMOs and one of three interviewed Western doctors come from a family of traditional medicine. This seem to have have formed a positive attitude towards traditional medicine, but only one of the CMOs mentions it as the most important contributing factor to choice of education and work.

When it comes to the interviewed TMPs, they all come from families of traditional medicine and have studied in the traditional way, with their father or grandfather. This fact can somewhat be explained as a matter of age; all but one of the interviewed TMPs were above 60 years of age, which is at least 20 years older than most interviewed Western and Ayurvedic doctors. Since Sri Lankan culture is undergoind rapid modernization, it is uncommon for todays young decendants of traditional medical practitioners to continue the family profession. The young people are either encouraged to go for a university education or to take up a job that has a higher earning capacity than does traditional medicine.

9.2.2. The educational system and its impact on choice of work and attitudes towards the other medical system

The impacts of the educational system can be divided in two categories; the impact of the competition for education and the impact of curriculum.

9.2.2.1. I wanted to be a Western doctor…

Sri Lanka has a highly competitive educational system, where your grades decide your ability to choose education. Only students who have graduated from the high school bioscience field with top grades in the A-level test are admitted to medical university. The second most difficult subject to be admitted to is dental school, then follows veterinary, agriculture, biomedicine and so on. As number five or six on the list comes Ayurvedic medicine. The following statement is not uncommon among the CMOs:

> *I don't know why I wanted to be a doctor. I got the highest marks in the GC-0 exam, so I thought of being a doctor. Unfortunately I did not get highest marks (in A-level exam) so I chose Ayurveda. /…/ But I wanted to be a doctor, so I did not chose dental or biomedicine or other subject. So I chose Ayurveda.*
>
> *(CMO)*

All but one CMOs interviewed had wanted to be a Western doctor. They all said they were very satisfied with their choice to become an Ayurvedic doctor, though they also expressed thoughts of Western doctors being above Ayurvedic doctors in the hierarchy. To some CMOs, this was an emotional subject. Among the Western doctors there was of a perception of that "*Good Ayurvedic practitioners gain equal respect to doctors*".

9.2.2.2. Impact of curriculum on perception of the other medical system

Another important aspect of the educational system, when it comes to the students and the practitioners attitudes and perceptions about the other medical system, is the impact of the curriculum of Medical and Ayurvedic universities. Even though

there is a strong tradition of indigenous medicine in Sri Lanka, the curiculum of the Western medical education only contain five to ten hours of Ayurveda and CAM in total. A common perception among Ayurvedic practitioners is that Western doctors *“don´t know what Ayurveda is, they don´t even know that Ayurveda is based on a scientific philosophy”.* The educational system is probably the most influential factor for this situation and one of the aims of CERCAM is to sensitise medical students to CAM through including more CAM in the schedule.

In the Ayurvedic universities, on the other hand, the curriculum contains almost fifty percent Western medicine. The westernization of Ayurvedic medicine is accused of not providing the students with a sound foundation in the Ayurvedic fundamentals, but most CMOs seem satisfied with learning both Western and Ayurvedic medicine they think it makes them better equipped to communicate with Western doctors.

9.2.3. Personal experience as influencing factor for Western doctors to be open to Ayurveda

All three Western doctors interviewed had had a personal experience of Ayurvedic medicine that had functioned as an eye-opener. For one, the experience was to be an apprentice with his father who is an Ayurvedic practitioner, for the other it was the experience of Ayurvedic medicine saving his wife from a painful operation. The first-hand experience of Ayurveda was mentioned to be crucial in order to appreciate the strenghts of Ayurveda and understanding that it is based on thorough fundamentals. According to one Western doctor, Western doctors in general are positive about Ayurveda, since they are exposed to Ayurvedic home remedies. He went on to explain that the fact that there are Ayurvedic charlatans using Western drugs though, makes many Western doctors suspicious towards Ayurvedic practitioners.

9.2.4. The existence of referrals from one medical system to another

The patterns of referring patients between medical subsystems can be seen as a measurement of integration. In section 9.1.1. it was described how Western doctors inofficially refer patients to Ayurvedic doctors. This chapter will describe how the practitioners of Ayurveda and traditional medicine act when it comes to cross-referrals.

9.2.4.1. Referrals from CMOs to Western and traditional doctors

All CMOs interveiwed were very aware of the limits of the Ayurvedic medicine, and tell that they readily refer patients with ischemic heart disease, cancer, chronic kidney disease in stage 3 or 4 and patients who need persistent or long time treatment to Western hospitals. Their referrals are not official, but more in the form of an advice to the patient to seek care.

When it comes to referring patients to TMPs, the CMOs explained that it is often hard for them to refer to practitioners of traditional medicine, since it is difficult to know who is a good practitioner. A majority of the CMOs know of a few good practitioners of traditional medicine, often specialist like fracture healers, eye-surgeons or a specialist for chronic kidney disease and refer patients to them. One of the CMOs explained the situation of refering patients in the following way:

I think most of them (patients) come to my place because they want to take medicine from me. Sometime I think I can't help them, so I refer to suitable physcisian, Western or Ayurveda. There is a famous traditional physcician for chronic renal failure in Dambulla area and I advice somebody to please go and visit that traditional practitioner.

(CMO)

9.2.4.2. Referrals from TMPs to Western and Ayurvedic doctors

Regarding the aspect of TMPs referring patients to Ayurvedic or Western doctors, I can not give a very accurate answer from the results of the study, since the time spent with TMPs was too short. Through the interviews with TMPs, I got the sense that they are divided in two camps; one group that is negative towards cooperation with Western medicine and another group that is more positive. This is reflected in the quotes of two different fracture healers interviewed.

Earlier we did not have x-ray, so it is unnecessary. I know when I touch the bone which part. According to my technology I can say which part of the patient is broken just by looking at them."

(Fracture healer 1)

Most of the people here are farmers. So they do hard work in the field. So they ask after treatment if ok or not yet to continue work. Then I say ok, if you are not sure, then you can take an x-ray so you can satisfy yourself.

(Fracture healer 2)

9.2.5. Lack of facilities creates both frustration and pride among Ayurvedic practitioners

There is an obvious lack of facilities for the CMOs in the CHPP. The office facilities are not adequate and all CMOs use their own private vehicles as means of transport in service. This is to be compared with their equivalents, public health physicians in the Western primary health care, whom all have a proper office and a government vehicle. The CMOs receive a monthly petrol allowance, but it covers only a small part of the actual costs of petrol. Their salary is the same as for Western doctors but they do not receive any allowances like the doctors do. Materials for workshops and information campaigns is sometimes payed by the CMOs and the HPOs, due to lack of funding by the MIM. The general lack of facilities creates a feeling of frustration about the work situation among the CMOs. The CMOs mention that the communication regarding these issues seem to be complicated by the fact that the ministers in MIM are not Ayurvedic doctors themselves, and hence do not really understand the situation and the needs of the doctors. The lack of facilities impacts the impression made by Ayurvedic doctors on the people, and a wish to have access to facilities and dignity on equal terms with Western doctors is often mentioned. A recurring theme mentioned by many CMOs, is that they think they do more work than the Western doctors although they have less resources, and that they work because they care for the people. The tacit understanding is that the Western doctors only work for personal gain and do not make the same effort to serve the people.

9.3. The people of Sri Lanka: Integration on grass root level

The results of this study are in line with previous research. Just as Wolffers (1989) has concluded, the limited empirical evidence of this study points towards that the people of Sri Lanka use both Western, Ayurvedic and traditional medicine, and that they tend to use Ayurvedic medicine for pains and chronic probems and Western medicine for acute complaints. The results also point towards a change in the people's choice of medical subsystems due to modernization of the society. This is reflected by the Ayurvedic doctors mentioning that people do not know Ayurvedic medicine or Ayurvedic life style anymore. The Ayurvedic doctors say they need to teach people what once used to be common knowledge. Especially young people are seen to neglect traditional and Ayurvedic medicine, whereas educated people are more interested in including Ayurveda in their lives. One of the Western doctors interviewed says that in general, people want the fast relief that Western medicine can offer, and the dependance on Western medicine has developed as the efficiency of it has increased. Both Western doctors and Ayurvedic doctors point out that the knowledge among TMPs is decreasing, which makes them less popular among the people. Contributing factors to the decreasing knowledge among TMPs is explained to be shorter apprenticeships, low interest among the young generation and extinction of medicinal herbs.

Despite the changes in society and the lack of an official referral system between practitioners, the people still integrate all available medical subsystems when seeking health care. The statement of one Western doctor describes this situation:

> *The general public is quite interested in integrated care. The problem is with the professionals, still they haven't worked on it. But people like it, always like to follow the standard medicine plus some traditional medicine together. But the two sectors are not managing that. But public opinion is for integration. Professionally things are slightly changing, people are more flexible than earlier.*
>
> *(Western doctor)*

9.4. Mixing versus integration

As mentioned before, around fifty percent of the curriculum of the Ayuvedic univiersities is dedicated to Western medical sciences. As I understood things during the interviews, this is a controversial subject. Most of the CMOs think it is good that they study both Ayurvedic and Western medicine at university. They often stressed that this makes it easier for Ayurvedic doctors to connect with Western doctors. Besides, they say they need to understand Western medicine because patients are taking Western drugs. They also need to know when to refer patients to Western medicine. At the same time, some of the CMOs thought they only receive a superficial knowledge of both Ayurveda and Western medicine during the education. This is also what the Western doctors involved in the CERCAM are pointing towards. They find that the graduates of Ayurvedic universities do not get enough training on the fundamentals of Ayurveda. The lack of knowledge on the fundamental theories, they say, produces a number of practices that are controversial. For example, the common practice of Ayurvedic doctors to mix Western drugs and technology into their diagnosis and treatment of patients. From the Ayurvedic practitioner's point of view, the mixing is mainly seen as a strength, but the Western doctors see this as a problem.

9.4.1. Mixing Western drugs with Ayurvedic practice

As just said, there is a problem with Ayurvedic doctors prescribing Western drugs without having the formal right to do so. There are two main reasons mentioned for this situation to appear. The first reason, mentioned by the Western doctors, is that Ayurvedic doctors are underestimating their own system. Due to a lack of good teaching hospitals, students are not provided with enough opportunity to practice Ayurvedic medicine. Thus they do not develop a strong confidence in the Ayurvedic system, and easily fall into practicing Western medicine once they get their registration. The second reason mentioned by both Western and Ayurvedic doctors is the increased money earning capacity of Ayurvedic doctors who prescribe Western drugs. Prescribing Western drugs increase the number of patients, since patients often seek the fast relief of Western drugs rather than the cumbersome Ayurvedic drugs and life-style advices. All of the interveiwed CMOs said they were not prescribing Western drugs, only Ayurvedic medicine.

9.4.2. Mixing ”Western technology” and Western concepts with Ayurvedic treatment

During participatory observations on field clinics I saw CMOs diagnosing patients with stetoscope and blood pressure meter more often than using the Ayurvedic diagnostic tool of pulse reading. Similarily, during a lecture on nutrional food for mothers, held by one of the CMOs, I observed the CMO using concepts of carbohydrates, proteins and vitamins more frequently than Ayurvedic concepts on food qualities. The following quote is an excerpt from an interview with a CMO and shows his way of reasoning around the use of blood pressure meter versus Ayurvedic pulse diagnostics.

> *I: I have seen you use the blood pressure meter. That is not Ayurvedic, is it?*
> *CMO: It is blood pressure technology. Technology is Western, but we can measure accurately. Now I want to check some patient´s blood pressure, and we have medicine for hypotension and hypertension. But we want to know what is that patient´s bloodpressure, we can follow western technology. We follow Western techonology, after we decide what is the condition of that patient, and after we can follow our medicine.*
> *I: That is very smart! In Ayurveda you can also read the pulse. Are you using that also?*
> *CMO: Yes. Measuring pulse is a huge field. It is not, I think sometimes I like that field, I want to first 3 or 4 years follow to learn. After then we can decide what is the condition of that period. /…/*
> *I: But is the pulse also telling other things?*
> *CMO: Yes, you can check the body type from the pulse. Vata, pitta, kapha. That is very easy. But most of people have stressful lifestyle and somebody come to our place during our mobile clinic.. Morningtime most of people doing farming or heavy work. And sometimes they are coming to see us and pulse rate is going up. Sometimes I think, first impression we can´t tell what is that person´s condition, from the pulse. And first we check. And after then, tomorrow, the day after tomorrow, please come once again, and then we can read pulse.*
> *I: So it takes longer time?*
> *CMO: Yes, longer time.*
> *I: But would it be better if you had the time for pulse reading? Would it tell you more?*
> *CMO: Yes. But this time we have Western technology and I think we follow that one and not wasting our time. Most of people come to our mobile clinic,*

about 100 people. I haven´t time to work and check their pulse. And if you want to check pulse our mind and our all body first want to get relaxed.

The discussion shows some interesting points. Firstly, mixing Western technology with Ayurvedic treatment is not seen as a problem. As a matter of fact, other interviewed CMOs justified the use of Western diagnostic techniques by explaining that those tools actually have their roots in Ayurveda. Secondly, it shows how the lack of thorough education on for example pulse reading, combined with a stressful worksituation, makes the CMO prefer the Western diagnostic technology. The Western technology is percieved to be the more efficient and the information received through pulse diagnostics is said to be possible to attain through just looking at the patient.

9.4.3. Integration of Ayurveda and Western medicine

There is an agreement of all interviewed Western and Ayurvedic doctors, that it would be of great benefit to patients to integrate the two systems of medicine.

Before independence traditional medicine more famous in our country. After that it was Westernized. They want to cure quickly. We want to choose suitable procedure, sometime suitable from Western sometimes from Ayurvedic. After that we can jump more, in our lifestyle, in our age. Somebody always taking Western medicine, somebody always taking Ayurvedic medicine - this is wrong. We want to know what is suitable procedure to integrate. Sometimes Western, sometimes Ayurveda.

(CMO)

So I have a great belief in Ayurveda, and it has a rich tradition. Not only Ayurveda, there is what you call deeshiya chikitsa, traditional medicine, and it has been there for more than 2500 years in Sri Lanka. And it has been tried and tested. So I think we should integrate both of these two types of medicine in our intern care and treat side by side. /.../ But there are failures and successes of both types of medicine. So you need to now, I have found it out by trial and error, what are the things that work and don´t work.

(Western doctor)

Practitioners of both sides see the strengths and weaknesses of their own system. The CMOs regard Ayurveda to be suitable for paralysis, stroke, diabetes, hypertension, hyperlipidemia and NCDs while Western medicine is regarded to be suitable for acute conditions such as road traffic accidents and poisoning. The Western doctors recognize Ayurveda as having its strengths in primary health care, for chronic problems in the geriatric population and for nutritioanl problems among children whereas Western medicine is percieved to have reached its limits. The strengths of the TMPs is manily in fracture healing and treatment of snake-bites, although there are also some competent general practitioners of traditional medicine; this is the general opinion of TMPs, CMOs and Western doctors.
The Western doctors often mention the need to produce scientific evidence of the strengths and weaknesses of the different systems in order for integration to come about.

9.5. Capacity building for integration

As I was studying the collaboration project between CHPP and CERCAM it became more and more evident, that what I was studying was a two-step process towards integration. The first step being capacity building among the CMOs and HPOs in order for the second step to take place: integration. There were two main areas where capacity building was needed: the planning and structure of the program and the research methodological skills among the CMOs and HPOs. Another thing that also became clear was the importance put by many of the involved practitioners on the director of CERCAM. His double competency in Ayurveda and Western medicine makes him function both as an initiator of cooperation and a bridge between the Ayurvedic and the Western practitioners.

9.5.1. Capacity building in public health management

All CMOs interviewed expressed a general feeling of being proud of the work of the Ayurvedic community health promotion program and find the work to be effective. The Western doctors and some of the CMOs, though, expressed a concern about the CHPP lacking comprehensive guidelines and long term planning. The plan for the collaboration between CERCAM and CHPP is to develop a systematic program, since it is needed in order to strengthen the system and make it more effective. They way this problem is planned to be overcome is through capacity building of the CMOs on the public health management aspects. The structure from the Western public health system will be built into the Ayurvedic program. This is appreciated by the CMOs who hope to develop their knowledge as well as the program.

> *So therefore I believe if we have a good proper schedule it also hundred percent help for us to deliver this service… Because I think the secret for the MOH is this; there is a guidebook, there is a plan. If there is a program, there is a guidebook. They have a proper schedule, they have a proper plan. They ask something about the program, they know, because they have proper plan. So I hope using this collaboration it will make good proper plan as well as good program. We will hope to establish especially for the measurable programs we are conducting number of program but some program you cant measure the progress.*
>
> *(CMO)*

> *With this collaboration program we hope to conduct some special clinics here, we hope to establish some very good program for outcome, we collect number of data number of information. There are no very good coordination inside this subject, and inside this program 100 percent is not here. That means all the doctors keep this records but not going for top level. It is especially due to the lack of human resources.*
>
> *(CMO)*

A problem in the structure of the program identified by the Western doctors is that the CMOs and the HPOs have a tendency to compare themselves to, and try to imitate the work done, by Public Health Inspectors [PHI] within the Western public health care system. The problem creates situations like CMOs duplicating the work done by Public Health Midwifes and the HPOs being unsatisfied with their work and wanting to have the same legal powers as the PHIs. The Western doctors see a need to adress this problem in order to build a strong foundation for the Ayurvedic health promotion program.

We have to train them and make sure that their role is different. Health promotion is not telling people to do something. The PHIs have been given the legal powers to practice health prevention through public health legislation. But health promotion is different. In health promotion we try to empower people. We don´t need two categories of people to do the same job. So now they have the opportunity to do that part through the Ayurvedic system and they should have their own identity rather than trying to get the identity of the PHIs. If they try to do that, then there will be conflicts.

(Western doctor)

One reason mentioned for this situation to occur is a lack of confidence in the Ayurvedic system.

I think one basic problem that I have been observing is that they don´t trust their own system, the Ayruvedic system, some of them. So if they trust their system they can develop their program. And the second thing is they have no training in public health. So public health is not easy. To develop systems and doing public kind of community health services without having a system is difficult.

(Western doctor)

A six month course in Ayurvedic public health care and data gathering skills is being planned for the HPO's, as a way to overcome the problems and increase their capacity. The CMOs will recieve supervision on public health management in order to create a Ayurvedic program with a solid foundation. The research carried out in the collaboration program will show what interventions are effective and which are not and where integration is possible.

9.5.2. Capacity building on scientific research

The main aim of the collaboration project is to produce scientific research on the outcomes of the CHPP in order to investigate where integration would be possible and effective.

Before we start integration in our sector, Western medicine, they will ask us "So how are you going to do this integration? Do you have evidence to say that this is going to be better?" So then first three years we are planning to produce that evidence, the evidence to say that this type of intervention can help the people. Then with that evidence we can go for integration. And this integration, this evidence, should be based on scientific medicine. If we wanting that evidence producing process and if we doing the research on methodology an all these things, now, as an example in Anuradhapura area, if I am involved in the research methodology process, usually they wont challenge it. So that is why, before integration we have to produce evidence and then go for integration.

(Western doctor)

The CMOs and HPOs will be involved in the data gathering for the production of evidence based research. As an example of the problems that can be encountered when involving the Ayurvedic staff in the research, I will share an experience from the field study. The collaboration program was at its initial stages when this study was conducted, but one survey with the aim of identifying all active TMPs in the Anuradhapura district had already been started up, and the results were being

analyzed by CERCAM. The Western doctors complained about low data return as well as lack of quality and completeness of the data returned by the HPOs and CMOs. At the same time, interviews with HPOs revealed that they thought they had managed well with the task of gathering data. CERCAM had managed to analyze the data and were now starting to come up with results regarding how many active TMPs there were in the Anuradhapura area. During my research, a misunderstanding between the CHPP and CERCAM was uncovered. CERCAM had given the HPOs the task to collect data on all existing TMPs in their districts. During participatory observation I understood that the HPOs were not doing what CERCAM was expecting them to do. Instead they had only collected data from five TMPs each, since that was the instruction they had been given by the CMOs and the director of CHPP. When reporting this back to CERCAM, the doctors were surprised and chocked. They had spent many hours explaining the task to everyone involved, but obviously the message had not been received. One of the Western doctors explained the situation in the following way:

> *They are not primed on scientific methodology. Some times what we talk and teach is not exactly grasped by them. That is simply not because they don´t want to, but they have not been trained and primed on these things. But we have to go and do it over and over again, and when they come across practical situations, like the data colelction we had now, they will realize what we are telling. So this takes time.*
>
> *(Western doctor)*

The initial problem of lack of knowledge regarding data gathering, statistics and research methodology in the CHPP manpower wil be overcome through capacity building and supervision of CMOs and HPOs.

10. DISCUSSION OF RESULTS

Through conducting the research I have understood that integration of medical subsystems is a delicate matter, influenced by structural factors such as politics, culture, educational system, professionalization, globalization and economy to a much wider extent than it seems to be influenced by medical aspects. In the following chapter the results of the field work will be discussed in relation to previous research and Unschuld’s theoretical framework.

10.1. Forces promoting and obstructing communication and cooperation between practitioners and the integration of Ayurveda, Western and Traditional medicine

10.1.1. Professionalization as an influencing factor for cooperation and integration

Through the regulation of Ayurvedic practitioners and the development of Ayurvedic universities, The Ministry of Indigenous Medicine has done a lot for Ayurveda to have the strong professional positition it does have in Sri Lanka today. According to Unschuld (1976, p. 19) a strong professionalization of traditional medical practitioners means they are more interested in participating in a modern

health care delivery system, the main driving force being a gain of secondary medical resouces. In the collaboration project, the interest of the CMOs to cooperate with the Western doctors can be argued to be driven by the fact that the collaboration is crucial for them to produce evidence of the effectiveness of the program. The evidence is needed in order to gain further allocations from the MIM, which could be seen as a secondary gain. There is also a personal interest in gaining knowledge on research methods, which in turn will be a way for them to improve the status of the Ayurvedic system as well as their own status. Hence, the professionalization of Ayurvedic practitioners can be seen as a promoting factor for cooperation and integration to take place.

Although one part of the Ayurvedic sector is highly professionalized, there is also another part that, despite regulations, is still very unstructured and hard to regulate and control: the practitioners of traditional medicine. Through meeting the TMPs and talking with the other informants about them, I understood how complicated and diverse the Ayurvedic sector is, and how much this impacts the Ayurvedic system as a whole. Compared to the Western medical sector that is very structured and homogenous, the Ayurvedic sector contains all kinds of practitioners, from non-registered but extremely good practitioners of traditional medicine to quacks with or without registration to Ayurvedic practitioners who have undergone a five year university training. Besides, according to the research of Wolffers (1988), they are all adapting to the modernization of society in different ways. This produces tensions within the Ayurvedic sector. For example, I was wondering why the TMPs had not already been involved in the CHPP. They are also Ayurvedic practitioners and probably would be of great help for the community health promotion program. The CMOs were very firm about the fact that only those with an Ayurvedic university education could work for the government. Although they respected the work of TMPs they found it difficult to cooperate with them, mainly because they found it hard to know who is a good TMP and who is a charlatan. The TMPs on the other hand, were sometimes suspicious about the "book-knowledge" of the CMOs. The diversity within the Ayurvedic sector is probably one of the reasons to many Western doctors being sceptic about Ayurvedic practitioners. If one Ayurvedic practitioner misbehaves, it is easy to judge all Ayurvedic practitioners alike. CERCAM however is open to include the TMPs in the collaboration project, and see them as assets instead of a problem. This would be a way to value their vast knowledge of traditional medicine that is in danger of disappearing and harnessing their capacity to reach patients. If the TMPs could learn a few things important for public health care, such as when to refer a patient to the hospital, there would be a great opportunity for cooperation between practitioners of both traditional, Ayurvedic and Western medicine.

10.1.2. Impacts of the political system on cooperation and integration

Sri Lanka has come a long way compared to other countries in matters of integration of traditional medicine in the health care system. Despite this, I would argue that the parallel approach to health care politics practiced in Sri Lanka does not support real integration of the medical subsystems. The parallel approach to integration of traditional and Western medicine present is, according to Bodeker (2001), based on the politicisation of the traditional health care sector and keeps the two sectors separated within the national health care system. This is to be compared with the integrational approach where Western and traditional medicine are integrated through medical education and practice, as in China (Bodeker, 2001). I

would argue that the integrated approach is better at promoting the integration of Western and traditional medicine than the parallel approach, since its aim is to provide the peope with adequate public health care rather than supporting a political system. A parallel approach seems to support structural competition rather than structured cooperation, since it keeps the secondary resources of the different medical subsystems separate. In practice, this can be seen in the fact that Ayurvedic and Western hospitals are separated and that there is no official referral system between the medical subsystems. Although the individual practitioners handle this in different ways according to their own perceptions and attitudes about the other medical subsystem, the lack of integration is a hindrance to further cooperation between practitioners.

10.1.3. The impacts of the educational system on cooperation and communication

The educational system must be said to be one of the most influential factors on practitioners attitudes, perceptions and behaviour regarding the other medical systems. The lack of CAM education for medical students, combined with a pride in their profession, has a negative impact on the possibility for cooperation between Ayurvedic and Western practitioners. As we have seen, this can be countered by personal positive experiences of Ayurveda and an open minded personality.
A more powerful way to increase the communication and cooperation between Ayurvedic and Western manpower would be to improve the curriculum of medical students. This is recomended by the WHO Traditional Medicine Strategy and is mentioned in Unschuld's theory as an important factor for structured cooperation to come about. CERCAM is taking steps for this to become a reality, through conducting a study on medical students attitudes an perception of CAM, as well as providing the medical students at Rajarata University with lectures on CAM.

Another important aspect of the educational system is the hierarchy between biomedical and Ayurvedic students. Most Ayurvedic practitioners had wanted to become Western doctors. Although they are happy with their work, it also creates a feeling of being inferior to the Western doctors and having less opportunities for upward mobility. This is a sign of the institutional arguement being true. I also understood that the government is investing more money in the Western sector, which means there are more and better for Western doctors. If the government would invest more money in the Ayurvedic sector and provide more government jobs, it would probably be more popular to become an Ayurvedic doctor. Hence, the hierarchichal structure of the educational system, as well as the lack of resources in the Ayurvedic sector, makes it less attractive to be a Ayurvedic practitioner. As we have seen, the constant fight for resources among the CMOs produces both feelings of frustration and of pride – both being obstructive to communication with the Western doctors.

Ayurvedic university students carry the double burden of both needing the knowledge of Western medicine in order to be able to communicate with the Western medical sector, at the same time as they are accused by Ayurvedic and Western scholars of getting only a superficial knowledge of the fundamentals of Ayurveda. I would argue that it is a strength to have university educated practitioners of traditional medicine in order to further integrate the medical susbsystems. It provides a common ground to stand on and makes it easier to communicate with Western doctors, as well as to build capacity regarding public

health management and research methodology, which is needed in order for Ayurveda to become more accepted and integrated. This is seen within the collaboration project in Anuradhapura, where it actually is possible to communicate between the CMOs and the Western doctors, and to build capacity regarding research methods and public health management.

On the other hand, the westernization of Ayurvedic education can also create problems such as Ayurvedic practitioners underestimating their own system or producing research that is not thoroughly based on Ayurvedic fundamentals. This produces a number of problems that will be discussed in the next section.

10.1.4. Incommensurability of Ayurveda and Western medicine and the implications of this on research

Looking at the impact of the integration of scientific research methodology in Ayurvedic medicine, it has showed to be of importance for Ayurvedic practitioners to stay true to their own fundamentals when designing research. The reason for the importance of this is explained by the fact that Ayurveda and Western medicine belong to different medical paradigms. Ayurveda and Western medicine have developed as two separate scientific traditions, and it is impossible to compare and contrast them, or to explain one theory by the other. In other words, they are incommensurable and it is imposible to say that one is superior to the other. As already mentioned, in Ayurveda, drugs are often made up from a combination of herbs. Thus, the action of the drug can not be judged by its separate constituents, since the action of the whole drug is often very different from that of its parts. This means that it is not possible to obtain any information about the medical properties of an Ayurvedic drug through carrying out clinical research in a chemical laboratory (Weragoda, 1980, p. 73). Unfortunately, the main bulk of Ayurveda research on Sri Lanka is clinical trials of single herbs. Another example of the incommensurability between Ayurveda and Western medicine is the inability of physiology or biochemistry to explain or translate the concepts of vata, pitta and kapha, the three elements concieved to govern the body in Ayurveda. Yet another example is that Ayurveda deals with disease in a holistic approach, prescribing both medicine, dietary regimes and certain behaviour adjusted according to the patients age, mental state and the season. A randomized clinical trial has to take all those aspects into account to produce desired outcomes (Sribaddana and Pilapitiya, 2013). If those aspects are not taken into account, the research might please the Western medical sector, while it actually empoverishes Ayurveda, since its real essence is not captured in the research. CERCAM is aware of this problem and a main aim of the collaboration is to produce research based on Ayurvedic fundamentals with the help of scientific methods.

10.1.5. Integration of drugs and techniques from another medical subsystem – mixing or integration?

The westernization process of Ayurveda is said to be one of the reasons for Ayurvedic practitioners to integrate primary medical resources from Western medicine into their practice. There seem to be a fine line between the positive and negative aspects of integrating primary medical resources from another medical system. Integration of some things, like statistics and research methodology by Ayurvedic practitioners, seem to lead to positive outcomes, such as more respect from the Western medical system. The adoption of drugs and diagnostic tools by

Ayurvedic doctors seem to have the opposite effect; the Western doctors dislike it and it creates tension between the different practitioners.

The importation of drugs and techniques from Western medicine can be seen as a way of stepping into the territory of Western medicine, competing for the same clients as Western doctors. The competition for patients and thus secondary resources, seen through the understanding of Unschulds theory, might be one reason for Western doctors to react negatively.

Going back to the incommensurability of medical concepts, the described situation of mixing diagnostic techniques and treatment options from different medical subsystems creates yet another problem. In order to treat a patient correctly with Ayurvedic medicine it is needed to conduct a proper Ayurvedic diagnosis. Otherwise important information is lost and the prescribed medicine can be ineffective or even harmful. An underestimation of their own system due to lack of understandning of the Ayurvedic principles of diagnosing and treating patients can be reason for Ayurvedic doctors to include Western drugs and techniques into their practice. A way to turn this situation around would be to conduct diagnosis both according to Ayurvedic pulse diagnosis and Western technology. The two methods would then complement and enrich the diagnosis, allowing the practitioner to prescribe the patient more thorough advice on medicine, food habits and exercises. This could either be done through joint clinics where Ayurvedic and Western doctors cooperate, or by a practitioner skilled in both medical traditions.

My interpretation is that Ayurvedic doctors, instead of basing their diagnostic techniques and informational campaigns completely on Ayurvedic techniques and concepts, mix it with Western techniques and concepts, in what is percieved to be a way to make the work more efficient and maybe even more accepted by the Western medical sector. What they accomplish is actually the opposite: they are stepping outside their own territory, into the field of the highly regulated Western medicine. This is not popular among Western doctors. There is also another perspective to it: there is no need for another set of doctors doing the same thing. What is important for the Ayurvedic sector is to identify their own principles, value them and work exclusively from them. That would also mean, as seen in the collaboration program, that they can not be challenged by the Western sector, because they are on their own ground. In both cases, integrating parts of another medical subsystem is threatening to water down the original medical system. Unschulds theory does not say anything about this kind of complication of the transfer of medical resources. It only says that for practitioners of one medical subsystem to be interested in adopting primary medical resouces from another medical tradition, they have to know that it produces increased secondary gains.

I would argue that when medical subsystems incorporate each others drugs or techniques, true integration is not created and cooperation is not achieved. It is just an adaptation to patients or societies demands that will eventually make the original system loose some of its strengths. Integration, in the sense that Ayurveda and Western medicine gain equal respect in the national health care system and cooperate in the treatment of patients, has to be built on an a thorough understanding of what makes each system unique. Research to prove this understanding has to be developed in a joint venture, with competency from both Ayurveda and Western medicine.

10.1.5. The functional and the institutional argument and their implications for cooperation and integration

Contrary to Waxlers findings, I draw the conclusion that the instiutional argument can not be the only reason for the continuation of the coexistence of Ayurvedic and Western medicine in Sri Lanka. As discussed earlier, there has been a mixing of Western drugs into the practice of Ayurvedic practitioners. What Waxler encountered might have been practitioners mixing Western drugs into Ayurvedic practice, thus providing almost the same drugs or avices as Western medical doctors. However, this does not necessarily mean that pure Ayurvedic practice does not provide unique treatments for problems that Western medicine might fail to treat. All informants in this study argue that there are certain diseases for which Ayurveda is more efective than Western medicine, as well as the opposite. For example, some forms of diabetes are said to be responding well to Ayurveda, wheras other forms are better treated with Western medicine.The problem is that it is hard to prove those statements, and more scientific evidence is needed. In fact, if the functional argument can be proved through research, that would provide a powerful implication for integration of Ayurveda and Western medicine.

At the same time, I would say that the institutional argument is also true. According to what I have seen and heard, it is obvious that the two medical subsystems are *linked to political and economic structures in society that provide their practitioners with social and economic benefits* as the institutional argument says. Unschulds theory is connected to the institutional argument, since he sees man's competition for resources to be the explanation to the conflicts surrounding the coexistence of Western and Ayurvedic medicine. I agree with this, but at the same time I do not think that the gain of secondary resources is the one and only motivation for practitioners of either Western or Ayurvedic medicine. I see the existence of referrals between practitioners of different medical traditions as a proof of this. If the practitioners would only be motivated by personal gain, I doubt there would be any cross referrals at all. An element of human care for the patients must also be a motivation for the individual practitioner. This aspect is not captured in Unschulds theory, but I would argue it is also a part of the picture.

10.1.6. Research as a bridge between practitioners of Ayurveda and Western medicine

Striving towards integration is a matter of building bridges between the medical subsystems in such a way that the most powerful system can be convinced of the benefits of including the less powerful medical subsystem, and the least powerful group of practitioners can be equipped with tools to do so. The language of modern science is evidence based quantitative research. Thus the production of well planned research is of utmost importance for Ayurveda to become accepted by the Western medical sector. The collaboration project will perform a number of observational and interventional studies based on proven survey and cluster methods as a means to provide evidence of the effectiveness of Ayurvedic health promotion. To convince politicans of the economic benefits of including Ayurveda in the health care sector is another important aspect for integration to occur.

10.1.7. Capacity building as a way to strengthen communication

In order to produce research in the "Outcome oriented, evidence informed Ayurvedic community health promotion program" there is a need to build capacity

on scientific research methodology and public health management among the CMOs and the HPOs. In fact, what that means is to build a common language that can increase communication between the sectors, through teaching the less powerful sector the language of the most powerful sector. Capacity building seems to be a crucial factor for the sucess of the program. If the Western doctors would only come in and conduct the kind of research they were interested in, this might produce good research, but it would not have any of the positive effects of capacity building. As I see it, through capacity building, there will be an empowerment of the Ayurvedic sector, building their self esteem, their trust in their own system and learning how to prove and communicate their work to the Western sector. On the other hand it is equally important for the Western doctors to learn about the strengths of the Ayurvedic health promotion and incorporate those parts that prove to be effective.

10.1.8. The importance of the inspiration to grow beyond a key person

The director of CERCAM seems to be an invaluable key person in the collaboration program. His double competency in Western and Ayurvedic medicine provides an overarching knowledge as well as a social bridge. Through Dr Pilapitiya, the project has been able to establish trust and political anchoring in both the Western and the Ayurvedic system. This is an initial strength of the program, but in order for the initiative towards increased cooperation, communication and integration of Ayurveda and Western medicine to spread, the work has to be structured in such a way that it does not rely on one person. What would be important is to use the initial energy of the project and the key person to build structures that allow involved parties to be empowered and inspired to continue the work. Through the steps taken by CERCAM, in the form of initiating the inclusion of CAM knowledge in the curriculum of medical students, through capacity building of CMOs and through the production of research, a foundation for increased communication and cooperation between practitioners of Ayurveda and Western medicine is built up.

10.2. Ayurveda versus biomedicine: Competition, cooperation or integration?

At last, I will try to answer the question stated already in the title of the thesis: Is there structured competition, cooperation or integration between Ayurveda and Western medicine in Sri Lanka?

10.2.1. The general situation of Sri Lanka: Structured competition

From the results of my study, I would say that the general situation of coexistence between Ayurveda and Western medicine in Sri Lanka is structured competition. I draw this conclusion from the fact that both Ayurveda and Western medicine are governed by political rules and regualtions. Although the regulations are not properly followed, there is a given structure that each profession has to adjust to. The reason for it being competition rather than cooperation is the fight for secondary resources between the medical subsystems. It is obvious that the Western medical sector is much stronger than the Ayurvedic sector; they have more secondary resources and a stronger impact on the health care system in general. This creates a situation where it is profitable for Ayurvedic doctors to include Western primary medical resources such as drugs and diagnostic techniques into their practice as a way to increase their money earning capacity. The incorporation Western medical concepts into the curriculum of Ayurvedic education is another

way for the Ayurvedic profession to become more accepted. The Ayurvedic doctors think it is good that they get knowledge on Western medicine, and that it is positive to use Western techniques when diagnosing, but they are not so positive about Ayurvedic practitioners prescribing Western drugs. Drugs seem to be more charged subject than techniques. Whether this is due to a fear of loosing secondary resources or a concern for patients is hard to tell. But it is interesting to ponder that it is regarded as a problem by those who hold the strongest negotiating power, the Western doctors, whereas the Ayurvedic doctors see it as something positive.

In a society with structured competition, Unschuld says that practitioners are not inclined to admit weaknesses in their own primary resources. I did not find this to be the case among my informants. The reason for this is probably that all the Western doctors I interviewed are scholars and positive towards integration. Instead of being intimidated by the strengths of Ayurveda, they are willing to explore the possibilities of including Ayurveda in the mainstream public health care. Among the Ayurvedic practitioners, most seemed to be very aware of the limits of their system, and prone to refer patients to Western hospitals if needed. This migh be a result of the westernized Ayurvedic education, or due to the involvement in the collaboration program, and hence the close contact with Western doctors. The TMPs interviewed were not as positive towards Western medicine as the CMOs, and were not as likely to admit weaknesses in their own system. Most probably this is because most of them belong to the older generation and they have not been exposed to so much of the Western science. Besides, they come from the rural areas, as compared to the CMOs who to a large extent grew up in cities.

10.2.2. The aim of the collaboration project: Structured cooperation

The collaboration project seems to be aiming for structured cooperation. One of the aims of the collaboration is to develop a formal referral system between Ayurveda and Western medicine. According to Unschuld, a common referral system is seen in structured cooperation. Furthermore he says that in a society with structured cooperation, there will still be two distinct medical susbsystems, but the practitioners of the two systems will cooperate in the treatment of patients. This is exactly what is the aim of the collaboration program. A merging of Ayurvedic and Western practice is planned within geriatric care, in which Ayurvedic and Western practitioners will cooperate around the same patients. The main idea is for the two systems to complement each other, through continuing to be based on their own fundamentals, and contribute with their different strengths in order for the patient to get a more thorough care and treatment. For example, Ayurvedic practitioners could conduct pulse diagnosis as well as measuring blood pressure. When combining the results, the diagnosis would be much more complete and offer other insights into the patient's health status than only blood pressure measurement does. In this way the geriatric care would be strengthened.

The strengths of the collaboration program is the dedication to produce evidence based research to show the outcomes of the Ayurvedic interventions. Since research is a bridge to communication with the Western medical sector, this will be give the program credibility and a chance to gain recognition for Ayurvedic primary health care on a national and international level.

Another important aspect covered by the project is the need for capacity building of the CMOs and HPOs will improve their ability to explain Ayurveda to the Western

scientific world. Through this, their work can be elevated and more respected in society.

In order for the coexistence of Ayurveda and Western medicine to take the form of structured cooperation, the educational system needs to be improved. CERCAM is looking at ways to improve CAM knowledge among medical students, as well as to develop a greater confidence in the Ayurvedic fundamentals among Ayurvedic practitioners. Those steps are needed to fully be able to develop structured cooperation, otherwise the two systems will remain uninformed about each others practice, and then cross-referrals or cooperation will be impossible to make.
The most important aspect to keep in mind when striving towards structured cooperation seem to be to appreciate the fundamental theories of each subsystem and find out where the combination or collaboration of them can enhance the outcome for the patient.

10.2.3. Is structured integration possible or even desirable?

Structured integration does not exist anywhere in the world, according to Unschuld. To integrate two or more medical subsystems to the extent where there is only *one* manpower group that is using *all* relevant primary medical resources, is a challenging task. Just as Unschuld mentions, it is important to consider who integrates whom. This implies an awareness of the power relationships between the two medical subsystems. As it is now, Western medicine is the strongest paradigm, supported by economic and political powers far more powerful than those supporting the traditional medicine. To develop one manpower group with a common ground requires an educational system based on a merging of Ayurvedic and Western medicine. A great awareness of the incommunsurabilities is needed then, in order not to loose the strengths of respective medical subsystem and produce hybrid doctors who lack a through understanding of any of the traditions. The question is if structured integration is possible, or even desirable, in the Sri Lankan setting.

10.3. Concluding remarks and implications for future research

It is very interesting to see that while the politicians and professionals struggle with the issues of cooperation and integration, the people are already combining all medical traditions in their quest to remain and become healthy. All involved are acting according to their own rationalities, whether it is personal gain, professional pride or health, but the rationalities seem to be conflicting. If the health of the people was the most important aspect on the agenda, there would probably not be so much conflict surrounding the topic of integration. The fact that there is money and power involved produces a situation where the least accepted tradition needs to work hard to be accepted. If the collaboration program can show evidence for Ayurveda being effective in the prevention and management of NCDs and geriatric populations, and furthermore show economic benefits of this, it would most probably be of great importance for the future popularity, acceptance and integration of Ayurveda into the primary health care in Sri Lanka. The results of the collaboration program could then be a way to increase the ability of the Ayurvedic sector to communicate with the Western sector. Once the Western sector understands how and in what way integration would be beneficial, it will be easier to cooperate.

Being self-reflective about the research, it might be a bit brave to draw conclusions on the overall situation of integration in Sri Lanka through studying a very specific project. The participants in the study can not be said to be typical Sri Lankan practitioners of either Western or Ayurvedic medicine. The Western doctors involved are all scholars, and have a different and more open-minded view of Ayurveda than most Western doctors have, as far as I have understood. When it comes to the Ayurvedic doctors, it is more common to work as private practitioners or within Ayurvedic government hospitals than in health promotion. It would be interesting to conduct the same kind of study with “normal” practitioners of Ayurveda and Western medicine, or with a wider variety of Ayurvedic practitioners.

The main focus of the study has been on understanding the relationship between the CMOs and the Western doctors, although the TMPs were included in the study. Due to lack of time and resources, it was not possible to delve deep enough into this aspect. Hence I have not fully answered the research question in regards to the communication and cooperation between TMPs and CMOs and Western doctors. The inclusion of TMPs in the study, however, gave a further understanding of the complexities of the Ayurvedic medical system in Sri Lanka and hence of the complexities of integrating Ayurveda and Western medicine.

Implications for future research:
An obvious area for future research is to conduct follow-ups on the development and results of the collabration project between CERCAM and CHPP. This would involve both qualitative interviews following up on how the expectations of the programs have been met, how the capacity building has proceeded as well as taking part of how the development of integrational programs.
Qualitative and quantitative research on the effects of the CHPP on the population would provide valuable information regarding the effects and impacts of the Ayurvedic health promotion program.
One topic that I would find interesting to explore, is how the presence of an “outsider”, for example a medical anthropologist, could contribute to enhanced communication and understanding between the different practitioners.

Although I might sometimes seem a bit sceptic about the politics of the health care system of Sri Lanka, it is also a country that has come a long way in integrating Ayurvedic medicine into the health care system. There are Ayurvedic hospitals and dispensaries spread across the island, providing the popuation with Ayurvedic treatments and medicine free of charge. The professionalisation of Ayurvedic practitioners is well on the way. The Ministry of Indigenous Medicine has done a lot of good work that is positive for the integration and cooperation of Ayurvedic, Western and traditional practitioners. At the same time, there is a very strong Western medical sector which is largely responsible for the long life expectancy of the people of Sri Lanka. Scientific evidence that acknowledges Ayurvedic fundamentals and draw upon the scientific methodology of Western medicine is now needed to find the best way to integrate the two medical subsystems.

LIST OF REFERENCES

BOOKS AND JOURNAL ARTICLES

Aresculeratne S. N. (2002). Interactions between Traditional Medicine and ”Western” Medicine in Sri Lanka, *Social Scientist*, 30, (5/6), pp. 4-17.

Ashwinikumar A. R. (2011). Integrative endeavor for renaissance in Ayurveda, *Journal of Ayurveda and Integrative Medicine*, 2, (1), pp. 5-8.

Backman, J. (2010). *Rapporter och uppsatser* (2nd ed), Lund: Studentlitteratur AB.

Bendelow G., Menkes D. (2006). Mind/Body Approaches to Health and Illness: A Challenge to Biomedicine? In *TASA Conference 2006* (pp. 1-10). University of Western Australia & Murdoch University.

Bodeker G., (2001). Lessons on integration from the developing world´s experience, *British Medical Journal*, 322, pp. 164-167

Bodeker G., Kronenberg F. (2002). A Public Health Agenda for Traditional, Complementary, and Alternative Medicine, *American Journal of Public Health*, 92, (10) pp 1582-1591.

Braun V., Clarke V. (2006). Using thematic analysis in psychology, *Qualitative Research in Psychology*, 3, pp. 77-101.

Debas H. T., Laxminarayan R., Straus S. E. (2006). Complementary and Alternative Medicine. In D.T. Jamison, J.G. Breman, A.R. Measham et al (Eds.), *Disease Control Priorities in Developing Countries* (pp. 1-12). Washington (DC): World Bank.

Gilje N, Grimen H. (2007). *Samhällsvetenskapernas förutsättningar* (3rd ed), Göteborg: Daidalos AB

Hartman J. (1998). Vetenskapligt tänkande. Från kunskapsteori till metodteori, Lund: Studentlitteratur.

Hartman J. (2004). Vetenskapligt tänkande. Från kunskapsteori till metodteori (2nd ed), Lund: Studentlitteratur.

Helman, C. G. (2007). *Culture, Health and Illness* (5th ed), London: Hodder Education.

Kleinman, A. (1980). *Patients and healers in the Context of Culture*, Los Angeles: University of California Press.

Kumar D., Chandel J. K., Bhardwaj A. K., Raina S.K., Sharma Y.K. (2012). Rationale of Integration of Complementary and Alternative Medicine (CAM) Health Facilities in Non Communicable Disease (NCDs) Surveillance, North India, *Journal of Community Medicine and Health Education*, 2, (5).

Kusumaratne S. (2005). Indigenous Medicine in Sri Lanka – A Sociological Analysis, Nugegoda: Sarasavi Publishers.

Kvale, S. (1997). *Den kvalitativa forskningsintervjun*, Lund: Studentlitteratur.

Liang V. G., Champaneria M. C. (2002). The New World of Medicine: Prospecting for Health, In *99th Anuual Scientific meetin of the Japanese Society of Internal Medicine*, pp. 159-63, Nagoya, Japan

Pal S. K. (2002). Complementary and alternative medicine: An overview, *Current Science,* 82, (5), pp. 518-524.

Sachs, L. (1989). Misunderstanding as therapy: Doctors, patietns and medicines in a rural clinic in Sri Lanka, *Culture, Medicine and Psychiatry*, 13, (3), pp. 335-349

Spradley, J. P. (1980). *Participant Observation*, Orlando, Florida: Harcourt College Publishers.

Srinivasan P. (1995). National health policy for traditional medicine in India, *World Health Forum*, 16, pp. 190-193.

Trost J. (2010). *Kvalitativa intervjuer* (4th ed), Lund: Studentlitteratur AB.

Unschuld P. U. (1976). Western Medicine and Traditional Healing Systems: Competition, cooperation or integration?, *Ethics in Science and Medicine*, 3, pp.1-20.

Waxler N. E. (1984). Behavioural convergence and institutional separation: An analysis of plural medicine in Sri Lanka, *Culture, Medicine and Psychitary*, 8, pp. 187-205.

Weerasinghe M. C., Fernando D. N. (2011). Paradox in Treatment Seeking: An Experience From Rural Sri Lanka, *Qualitative Health Research*, 21:3, pp. 365-372.

Weragoda P. B. (1980). The traditional system of medicine in Sri Lanka, *Journal of Ethnopharmacology*, 2, pp. 71-73.

Wolffers I. (1988). Illness behavior in Sri Lanka: Results of a survey in two Sinhalese communities, *Social Science Medicine*, 27:5, pp. 545-552.

Wolffers I. (1999). Traditional practitioners' behavioural adaptations to changing patients´demands in Sri Lanka, *Social Science Medicine*, 29:9, pp. 1111-1119.

Wolffers I. (1990). The Role of Traditional Medicine in Primary Health Care. In I. Wolffers (Ed.), *The role of Traditional Medicine in Primary Health Care* (pp. 3-15). Amsterdam: VU University Press.

INTERNET MATERIALS

Department of Ayurveda (2013). *Central Province, About us*, assessed on the 20th of May 2013 at http://www.ayurvedacpc.org/en/home/about-us.html.

Maps of the world (2013). *Sri Lanka,* assessed on the 23rd of May 2013 at http://www.mapsofworld.com/sri-lanka/

Ministry of Health (2013). *About us*, found on the 20th of May 2013 at http://203.94.76.60/health/eng/index.php?option=com_content&view=article&id=297

Ministry of Indigenous Medicine (2011). *The Ministry of Indigenous Medicine*, assessed on the 9th of March 2013 at http://www.indigenousmedimini.gov.lk/About_us.html.

Pilapitiya S., Sribaddana S. (2013). Issues in Clinical trials in Complementary and Alternative Medicine (CAM), *Current Opinion*. Assessed on the 2nd of February 2013 at http://www.elsevierblogs.com/currentcomments/?p=998

WHO (2008a). *Background of WHO Congress on Traditional Medicine*, assessed on 9th of March 2013 at http://www.who.int/medicines/areas/traditional/congress/congress_background_info/en/index.html

Wikipedia (2012). *Ayurveda,* assessed on 9th of March 2013 on http://en.wikipedia.org/wiki/Ayurveda).

Wikipedia (2013) *Doctor of Medicine in Sri Lanka*, assessed on the 3rd of March at http://en.wikipedia.org/wiki/Doctor_of_Medicine#Sri_Lanka

Yatawara D. (2013). Will Ayurveda and Western medicine link?, *Sunday Observer*, Assessed on the 28th of May 2013 at http://www.sundayobserver.lk/2013/02/24/fea16.asp

OFFICIAL DOCUMENTS

Ministry of Finance and Planning (2012). *The Budget Speech 2013*

Ministry of Indigenous Medicine (2012) *Progress 2011/2012; Budgetproposal 2013*.

Parliament of Ceylon (1961). *The Ayurvedic Act No 31 of 1961*, Government Press, Ceylon.

Sri Lanka Medical Association (2013). *SLMA Code of Conduct for members*

REPORTS

WHO (2008b). Beijing Declaration

WHO (2011). Country Cooperation Strategy at a glance.

WHO (2001). Legal Status of Traditional Medicine and Complementary/Alternative Medicine: A Worldwide Review.

WHO (2006). WHO Country Cooperation Strategy 2006-2011 Democratic Socialist Republic of Sri Lanka.

WHO (2002). WHO Traditional Medicine Strategy 2002-2005.

UNPUBLISHED DOCUMENTS

CERCAM (2012) Establishment of outcome oriented, evidence informed Ayurvedic Community Health Promotion Program in Anuradhapura.

APPENDIX 1.

INTERVIEW GUIDE

Background on socio-demographic factors:
Age, sex, ethnicity, religion, rural/city, family background?
What kind of healthcare was used in your family of origin?

Educational background:
Where/how did you study? For how long?

Background on working conditions:
Where, since when, number of patients per day, type of patients, patient fee, private/employed by the state?

Treatment situation:
What kind of clients do you have? What do you do with you clients? How many per day?
Do you ever refer patients to a practitioner of another medical profession?
Why do people come to see you and not someone from the other medical system?

Perceptions and attitudes towards own and other medical systems:
Did you ever study anything about the other medical systems?
Do you think you have a good understanding about their fundamental concepts and practices?
What do you think of Ayurveda/western medicine/traditional medicine?
What do you think about the practitioners of Ayurveda/western medicine/traditional medicine?
Did you or someone you know get help from the other medical systems?
What is the most important contribution Ayurveda/western medicine/traditional medicine has to offer the public health care in Sri Lanka?
How would you feel/think about cooperating with Ayurveda/western medicine/traditional medicine?

Possible outcomes of the collaboration project:
What are your expectations on the collaboration between CHHP and CERCAM?
What are your hopes for the integration?
What do you see as possibilities/obstacles for the collaboration/integration?

Ministry of Indigenous Medicine:
What do you think about the Ministry of Indigenous Medicine