

Summit for the Future, Club of Amsterdam, May 4th, 2006

Integrative Medicine - Integrating
Complementary and Alternative Medicine into Mainstream Medicine

Prof. Dr. Gustav J. Dobos

Chair for Complementary and Integrative Medicine of the

Alfried Krupp von Bohlen and Halbach-Foundation

University of Duisburg-Essen. Germany

gustav.dobos@uni-essen.de

www.uni-essen.de/naturheilkunde

Integrative Medicine is a new approach in the treatment of the most common chronic, as well as acute illnesses. It employs proven methods and procedures developed within the therapeutic systems of Complementary Medicine (here after Complementary and Alternative Medicine or CAM) and of Mind/Body Medicine. The following overview introduces the essential components of the German concept of Integrative Medicine that has been developed over the past years at the Chair for Complementary and Integrative Medicine at the University of Duisburg-Essen.

What Do We Mean by Integrative Medicine?

Metaphorically the term “Integrative Medicine” can be understood as multilingualism. An integrative physician uses several different “languages” to understand and to treat a patient and his diseases. These languages are on the one hand the Mainstream Medicine and on the other hand the Complementary and Alternative Medicine (CAM) as well as the Mind/Body Medicine that helps patients to develop skills in improving the self-healing capacity of the body and in coping with illnesses through behavioural methods. An integrative physician approaches a patient and his individual situation without prejudice and specific preference of healing methods. Decisions about the most appropriate methods are based on both the relevant scientific evidence (external evidence) as well as on the physician’s own experience (internal evidence).

Why Integrative Medicine?

An analysis of the prevalent illnesses in Europe shows a significant shift in the last decades. Due to the enormous progress in modern medicine, acute infectious diseases have become less threatening; the number of deaths they caused is decreasing steadily whereas chronic diseases are developing into a new scourge in the Western culture. Most of the over 65-year-olds are suffering from chronic illnesses, which causes an explosion in medical care cost. In Germany about 80% of the expenses of the health system are spent in chronically ill patients. This situation is not merely a financial problem, but a new challenge for physicians since a large percentage of patients suffering from chronic diseases benefits from conventional therapies only to a limited degree. Moreover, long-term medication rarely leads to a complete cure of the illness it treated and chronically ill patients are often exposed to long-term polymedication that causes interactions between the prescribed substances which still cannot be fully understood. That may be the reason why the compliance ranges of these patients are rather low.

In many cases medication taken over years causes side effects which could be so problematic that they themselves need further treatment. Side effects often handicap the carrying on of the original treatment, and in some cases they even cause death. Official (!) figures show that in the U.S. over 100.000 patients die annually because of side effects of their medication (4). For this reason, the extended treatment approaches become most significant.

CAM and Integrative Medicine

Complementary and Alternative Medicine (CAM) enjoys a growing popularity in Germany and the United States (1). This trend exists independently from the scientific evidence that is unknown neither to physicians nor patients in many cases. In spite of the enormous popularity the number of systemic and scientific researches is still very limited. CAM methods have been systematically investigated by several active groups of scientists in Europe and the United States only since a couple years. After the National Centre for Complementary and Alternative Medicine (NCCAM) at the National Institutes of Health was established in the U.S. in 1998 research on a larger scale has become possible. Today, the NCCAM provides 140 million US dollars for research on CAM and on Mind/Body Medicine annually.

Meanwhile the concept of Integrative Medicine (Integrated Medicine in the U.K.) has been established at a number of well-known medical schools in the United States. Stanford

University, Harvard Medical School, the University of Arizona and the Sloan Kettering Hospital in New York City are currently running out-patient programs based on the principles of Integrative Medicine successfully. These institutions have reached new quality standard because the health care services they provided are evaluated scientifically based on the paradigms of Evidence-Based Medicine (EBM)

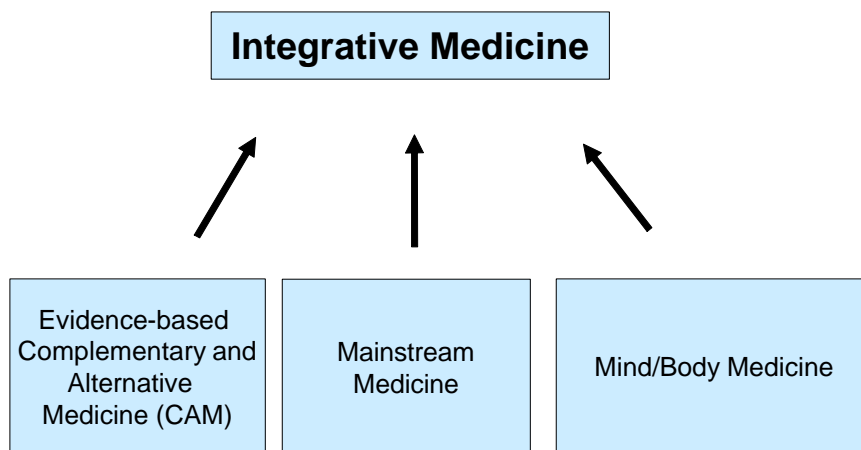


Fig. 1-1: German Concept of Integrative Medicine

Integrative Medicine in Germany

The first chair of Naturopathy in Germany was established at the Benjamin Franklin University Hospital in Berlin in 1989, followed by the founding of the Chair of Naturopathy at the Rostock University. The focus of the Rostock University was to integrate naturopathic medical treatments into rehabilitative therapies.

In 1999 the first clinic for Internal Medicine with the focus on Integrative Medicine in Germany was established at the Kliniken Essen-Mitte as a model institution of the state of North-Rhine Westphalia. This clinic is equipped with a 54-bed ward for in-patients, a day-care clinic as well as an out-patient clinic for CAM with special focus on Traditional Chinese Medicine. Its goals are the application, evaluation, and research of CAM therapies and their

integration into clinical treatment. Since its opening it has treated more than 9.000 in- and out-patients already.

After a 5-year evaluation period regarding the research and teaching of the model institution, the Scientific Board of the University of Duisburg-Essen approved the establishment of the Chair for Complementary and Integrative Medicine, the first one of this kind in Germany. This establishment and the funding from the Alfried Krupp von Bohlen und Halbach Foundation provide an unique opportunity for clinical implementation of the newest findings in CAM research.

The clinical experience of the institute indicated that most chronic diseases require a life-long drug treatment that potentially causes severe side effects like chronic diseases of the digestive, endocrine, cardiovascular and musculoskeletal system as well as diseases of the connective-tissue, metabolic diseases, pulmonary diseases and chronic pain. These indications coincide with the chronic illnesses that cause most of the spending in the German health care system.

Applying integrative approaches in the treatment of chronic illnesses has been shown to be worthy, especially when long-term treatment is warranted, since a combination of conventional and CAM methods often optimize treatments. If they are applied correctly, they constantly support the reduction of drug-induced side effects because dosage of drugs can be reduced by enhancing the self-healing capacity of the body through CAM and Mind/Body methods.

Advantages of Integrative Medicine

Leech therapy, a CAM treatment method for painful osteoarthritis, is a good example to demonstrate the potential advantages of CAM methods. This method might seem to be exotic, but its use has been documented in Europe since Hippocrates more than 2000 years ago. Scientific research has proven its therapeutic value in treating osteoarthritis for the knees. Eighty percent of patients who have been treated once, with four to six leeches, report a 60% reduction of pain. On an average, this pain reduction occurred within 3 days after the treatment (5). For 70% of the patients this positive result maintained for at least three months. The effect lasted even for over six months for 40% of the patients. One year after treatment one third of the patient still reported a reduced dosage of pain medication. Thus, the leech treatment has been shown to be considerably more effective than all other known pain

treatments for this condition. Effects of conventional treatments regularly last for a mean of 24 hours only. After undergoing leech treatment, non-steroid anti-rheumatic medication can be reduced in many cases or even discontinued which at the same time reduce the potentially harmful side effects.

Recognition of patients' needs

Besides scientific evidence and costs, patients' needs and wishes play a very important role in the process of choosing the form of therapy. It is well known that patients with chronic diseases do not wish to take medication with large side effects potential known.

CAM therapies, alone or in combination with Mainstream Medicine, are becoming increasingly popular. A recent Allensbach-survey (08/2005), comp. 1-2a-d, (1) showed that in case of an illness half of the German population would prefer to be treated with a combination of Mainstream Medicine and CAM methods. Which mean every second person favours an Integrative Medicine. Only one third wants to be treated conventionally and 7% would prefer a CAM treatment exclusively.

Even more striking were the results of the questions concerning Traditional Chinese Medicine (TCM). Only 18% stated that they would reject being treated with methods like acupuncture if these opportunities were offered by their physicians in addition to conventional therapies. Among the questioned 31% has had experience with TCM already (26% with acupuncture and 5% with other methods). 61% of the questioned opted for a combination of Chinese and Western medicine. Of those who had experience with TCM as many as 89% advocated this combination (comp. 1-2d).

This positive evaluation does surprise. It indicates that the majority of those who had been treated with TCM methods were satisfied with the treatment and their results. The compliance with integrative treatments can generally be expected to be high and interestingly components of conventional medicine within integrative treatment concepts enjoy an increased compliance as well.

Results of the Allensbach-survey (page 9-11)

Non-conventional components of Integrative Medicine

1. Naturopathy and CAM

In Germany the term naturopathy stands for the body of knowledge about natural remedies and methods of healing and in addition refers to measures that apply natural means to therapeutically stimulated self regulating processes that foster the organism's ability to heal itself or to stay healthy. This German understanding of naturopathy is only part of the Complementary and Alternative Medicine (CAM), the umbrella term of complementary healing methods used in the United States. Depending on the system of classification, between 130 and more than 200 methods and applications can be considered as naturopathic. For some of these a high standard of evidence is available while others must be considered to be dubious. Systematic research is still required for further investigation and evaluation of CAM methods.

Classic German naturopathic methods range from therapeutic methods on nutrition and exercise to hydro- and phyto-therapies, as well as Mind/Body Medicine (so-called Ordnungstherapie). Apart from Kneipp, balneo-, massage- and manual therapies are also classical components of the German naturopathy.

Besides these classic methods the catalogue for medical training in CAM lists a large number of "extended naturopathic methods". The so-called derivative procedures from ancient European medicine, neural therapy as well as osteopathic treatments are sub summarised there. A third category includes so-called "other therapeutic principles" like TCM. Homoeopathy constitutes a separate approach and is not defined as a naturopathic method in Germany.

2. Mind/Body Medicine

Mind/Body Medicine (MBM) utilizes the existing interactions between mind and body in order to enhance the capacities of organism for self healing and is considered as part of CAM. The National Institutes of Health defines MBM as "interventions that use a variety of techniques designed to facilitate the mind's capacity to affect bodily function and symptoms". (6). Fundamental research was conducted by the teams of Herbert Benson (Mind/Body Medical Institute at Harvard Medical School) and of Jon Kabat-Zinn (University of Massachusetts Medical School). Currently, the National Centre for Complementary and

Alternative Medicine (NCCAM) runs a designated program to investigate biochemical and structural phenomena of MBM.

Evidence of Mind/Body medical therapeutic potential has been shown in the following symptoms and conditions: coronary artery disease, hypertension, inflammatory bowel disease, chronic rheumatic diseases, chronic pain, chronic headache, migraine, depression and others. In addition, MBM also has positive effects such as adjunctive treatment for breast cancer.

The therapeutic concept of the Mind/Body Medical Institute at Harvard Medical School in Boston for out-patients served as a model for the in-patient program established at University of Duisburg-Essen and includes several modules like the so-called relaxation response (3), cognitive restructuring, exercise, nutrition, and the aspect of social support, which are interconnected to a comprehensive therapeutic concept.

During years of cooperation with the Mind/Body Medical Institute in Boston, the American concepts of Mind/Body Medicine have been combined with the German concept of “Ordnungstherapie” in Essen. This newly integrated therapeutic concept has been implemented into the clinical treatment routines of a German hospital, and scientifically evaluated. During the last six years, over 7.000 in-patients and more than 2.000 outpatients were treated according to the concept of Mind/Body Medicine additionally to CAM and mainstream treatments. It aims at the promotion of sustainable life style changes that allow the patient to best foster his or her own health (7). Independent of the therapeutic context - in-patient or out-patient, curative, rehabilitational or preventive, the activation of the patient’s own resources for healing and health remains the main target of all Mind/Body interventions. This aim can be reached by establishing a life-style that is structured in ways that allow both physical and mental self-healing. Such a life-style includes stress reduction and the cultivation of an individually appropriate balance between activity, rest, and recreation. In addition, a constructive style of coping with the person’s own limitations and disease is promoted as well. The basis for all of these interventions is formed by an understanding of the human condition that includes the biological, cognitive, psychological, social and spiritual dimensions. All interventions are grounded on a salutogenetic attitude towards the patient.

Scientific evaluation

Decisions about the application of CAM methods within the context of Integrative Medicine are based on the evidence available for the respective methods. Due to the lack of evidence in

some areas of CAM, application in some cases is also based on clinical experience of a group of experienced physicians (internal evidence). Additionally aspects of scientific plausibility based on a coherent scientific paradigm are taken into consideration. The rating of a method according to its scientific plausibility allows a provisional classification of the procedure until sufficient external evidence, which is always the major goal, is reached. The Centre for Reviews and Dissemination, a research institution that is associated with the National British Health Authority, pragmatically suggests to base decisions if a method would be applied or not on three factors:

- The level of evidence
- The costs of treatment
- The potential side effects

In order to recommend a therapeutic procedure as a “first line intervention” a high level of evidence is required. On the other hand, a procedure with a lower level of evidence can also be recommended as an adjunctive treatment for refractory patients, e.g. for patients with a chronic condition. Following this rationale the recommended hierarchy of decisional factors may change especially in cases of chronic illnesses where the therapeutic options are reduced.

To summarise, the practice of Integrative Medicine provides a combination of Mainstream therapies with CAM and Mind/Body methods. Very often, especially when chronic conditions are involved, this combination allows the implementation of more successful treatments. Paradigms of Mainstream Medicine remains to provide the basis for all treatment, but often this extended approach of Integrative Medicine can optimise therapeutic options in chronically ill patients. The fewer the side effects of a long-term treatment are, the higher is the quality of life a patient can achieve.

References:

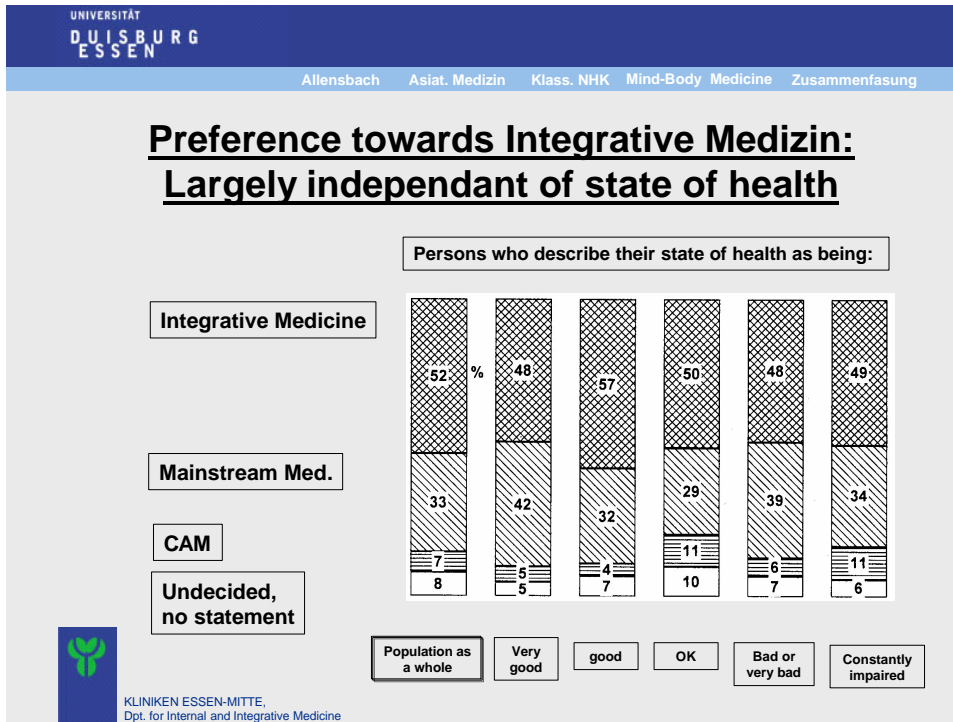
- 1 Allensbach Survey: „Integrative Medicine and Traditional Chinese Medicine- Results of a representative population based survey“, Institut für Demoskopie Allensbach, August 2005
- 2 Eisenberg DM, Kessler RC, Foster C, et al. Unconventional medicine in the United States. N Engl J Med. 1993; 328: 246–252.

- 3 Hoffman JW, Benson H, Arns PA, et al. Reduced sympathetic nervous system responsibility associated with the relaxation response. *Science* 1982; 215, 190–192.
- 4 Lazarou J, Pomeranz BH, Corey PN. Incidence of adverse drug reactions in hospitalized patients: a meta-analysis of prospective studies. *JAMA*. 1998 Apr 15;279(15):1200–5.
- 5 Michalsen A, Klotz S, Ludtke R, Moebus S, Spahn G, Dobos GJ. Effectiveness of leech therapy in osteoarthritis of the knee: a randomized, controlled trial. *Ann Intern Med*. 2003 Nov 4;139(9):724–30.
- 6 <http://nccam.nih.gov/health/backgrounds/mindbody.htm#background>.
- 7 Tuomilehto et al. Prevention of type 2 diabetes mellitus by changes in lifestyle among subjects with impaired glucose tolerance, *N Engl J Med* 2001; 344: 1343–50.

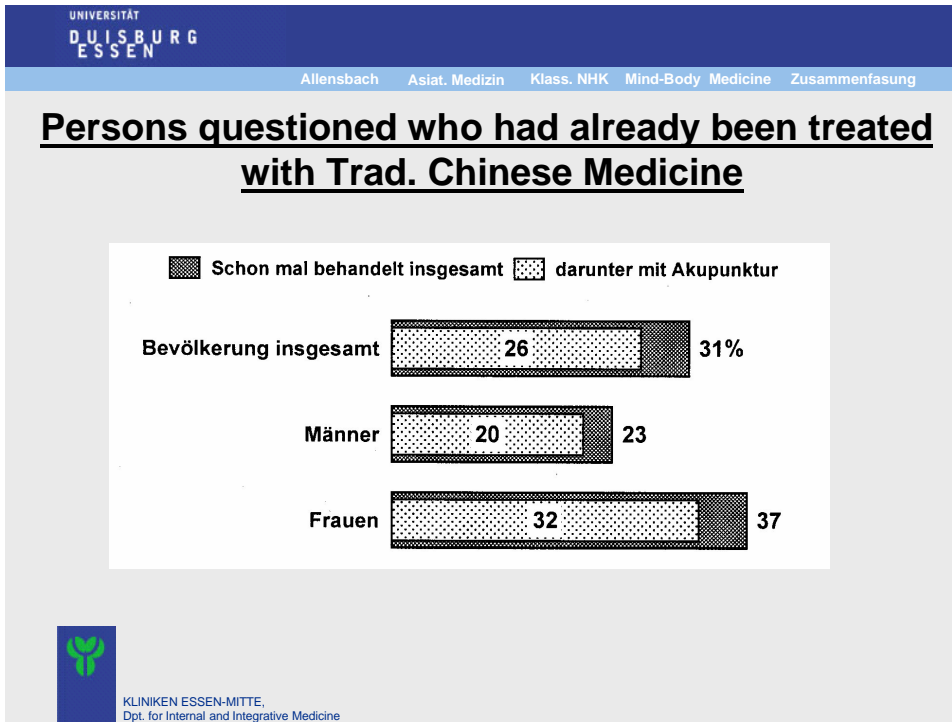
Fig.1-2: Results of the Allensbach-survey 08/2005

- a) Preference towards Integrative Medicine: Largely independent of state of health
- b) Persons questioned who had already been treated with trad. Chinese Medicine
- c) Clear Preference towards: Treatment including TCM-methods
- d) Persons who know TCM -methods, to a large extent prefer a combination of both

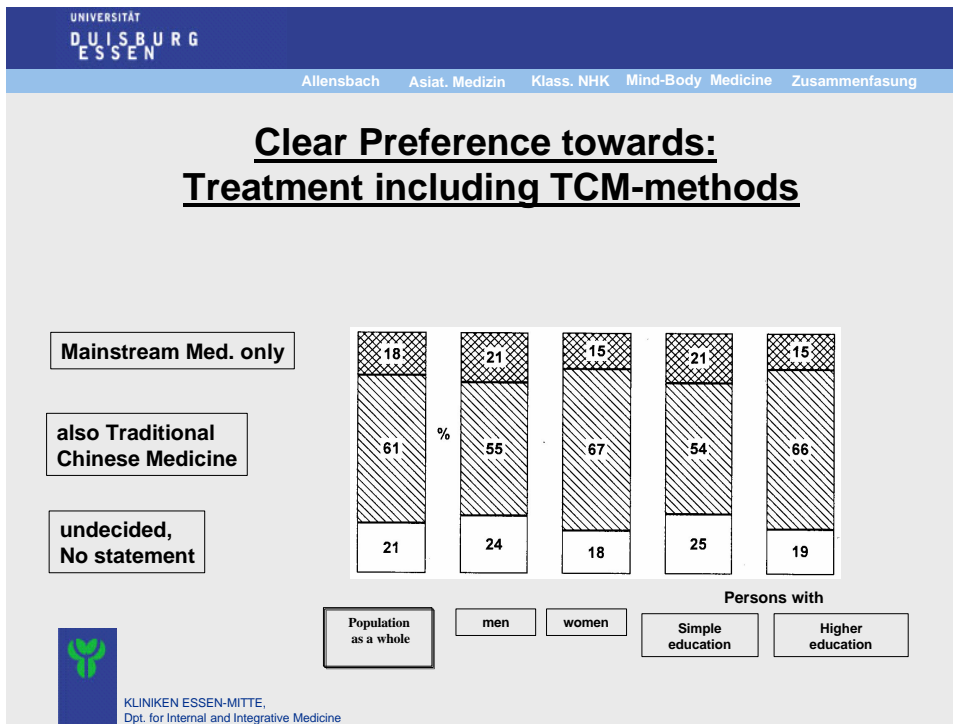
a)



b)



c)



d)

