



Peggy M.P.C. Bosch
Maurits W.M.L. van den Noort

Schizophrenia, & Sleep, Acupuncture

HOGREFE



Schizophrenia, Sleep, and Acupuncture

We would like to dedicate the book to all patients with schizophrenia.

Schizophrenia, Sleep, and Acupuncture

Peggy M.P.C. Bosch

Maurits W.M.L. van den Noort

(Editors)

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Preface

In 2005, after having done some literature research on the use of acupuncture in the treatment of schizophrenia, we (Peggy Bosch and Maurits van den Noort) came up with the idea that it might be interesting to gather experts from both fields and to publish a book. The aim of the book should be to combine the background and all important theories from both Traditional Chinese Medicine (TCM) as well as from Western medicine, which are involved in schizophrenia, acupuncture, and the acupuncture treatment of patients with schizophrenia. Being psychologists ourselves, and being involved in TCM (Peggy Bosch studied acupuncture in Amsterdam, The Netherlands) made us realize how large the misunderstandings between Chinese medicine and Western medicine really are. Moreover, we realized what a pity it is that there is so little cooperation between the two fields. Both traditions have something to offer and might be used simultaneously, creating more positive results for the patients. In short, we thought it necessary to try to build a bridge between Western and Chinese medicine.

We had our first talk with some of the staff from Hogrefe & Huber at the 9th European Congress of Psychology in Granada (2005), Spain, where we learned that they were interested in publishing an innovative book on this intriguing subject. This talk was the start of the book that lies in front of you now. From that moment in Granada on, we continued to do research into this highly interesting field, finding that hardly any serious research had been conducted on the combination of schizophrenia and acupuncture outside of China.

The theoretical concept behind the treatment of schizophrenia with acupuncture has to date almost always been described from a Chinese medicine point of view, which is not really something that Western scientists or psychiatrists are able to grasp. We, therefore, decided to try to edit a book on this subject, which might shed some light on its background from both Western and Chinese points of view.

After continuing our own research, we came to the conclusion that sleep disorders are an essential aspect of many mental disorders, which acupuncture has a very strong and positive effect upon. Sleep disorders are, in fact, a key symptom in most patients with schizophrenia and we, therefore, decided that sleep and its related disorders needed to have an essential place in this book.

One goal of the present book is to be an introduction for Western MDs, psychiatrists, and psychologists who might be interested in a possible cooperation with acupuncturists, as well as for acupuncturists who wish to know more about the Western medicine's concept and understanding of schizophrenia and sleep disorders, and the relationship between these disorders. Moreover, we hope to be

a source of information for patients with schizophrenia and their families and friends.

We hope that, by editing and publishing this book, we will create more understanding and stimulate cooperation across the borders of the system of medicine we were taught, in order to create better treatments for our patients. In line with this “East-West” cooperation, we have gathered experts from both traditions of medicine; moreover, the various contributions came from a range of different countries: Belgium, China, Denmark, Germany, Israel, Korea, Macedonia, The Netherlands, Norway, Switzerland, the United Kingdom, and the United States of America.

In selecting the contributors, it was our intention to attract experts in all the fields that we thought appropriate to include in the book. We aimed to include authors from universities, but also some practitioners who are in direct and daily contact with patients. For some chapters practitioners joined forces with researchers. At this point, we would like to briefly introduce our authors to you.

Part I focuses on schizophrenia and Western research into this area so far. We found Prof. Hugo A. Jørgensen and Dr. Erik Johnsen from the University of Bergen, Norway, willing to write an introductory chapter on schizophrenia. Prof. Jørgensen is an internationally known (Danish) author and researcher in the field of schizophrenia. Although he has had a critical attitude when it comes to the idea of using acupuncture in patients with schizophrenia, he has kept an open mind and supported the idea of testing it thoroughly. We truly appreciate this point of view and are honored to have him contribute to the book. Dr. Johnsen is one of his gifted pupils. In his clinical work, he shows a warm heart toward his patients. He recently finished his PhD at the University of Bergen, Norway.

We the Editors (Dr. Maurits van den Noort and Peggy Bosch, MA) have written Chapter 2 on schizophrenia and what has been discovered from neuroimaging research. Dr. Van den Noort is a Dutch researcher who received his PhD at the University of Bergen, Norway. He was a member of the Bergen fMRI Group for several years and since neuroimaging research on schizophrenia is a subject that has an emphasis in this group, he is well suited for this chapter. Ms. Bosch has a masters in clinical psychology. Moreover, she is an acupuncturist and she is currently working as a PhD student on the Schizophrenia, Sleep, and Acupuncture project at the Radboud University Nijmegen, The Netherlands. She also works as a clinical psychologist with an emphasis on patients with schizophrenia.

For Chapter 3, Dr. Bart Ellenbroek from Evotec Hamburg, Germany, joined the team to add his expertise in the field of pharmacotherapy and schizophrenia. Dr. Ellenbroek is a researcher who formerly worked at the Radboud University Nijmegen, The Netherlands. He is very fond of and gifted in research with rats, and he has a very broad view when it comes to research. He is a person who is always willing to help, and who usually has great practical ideas when it comes to methods of research or applying for grants. We hope that our collaboration will

stay as inspiring as it has been over the last year and we thank him for his input and advice. Moreover, I (Peggy Bosch) thank him for his involvement in my project. His support in the preparation has meant more to me than he will ever know.

Dick J. Brouwer, MD, Annita Bosveld, MA, Ineke van der Lans, and Dzelal Dani, MSc, are a group of colleagues from GGNet Groenlo (The Netherlands). They wrote Chapter 4 on their practical experiences in the treatment of patients with schizophrenia. Dr. Brouwer is a psychiatrist with many years of experience in the field of schizophrenia. Together with Ms. Van der Lans, he is in charge of the Hearing Voices project that is run at this department. Ms. Bosveld is the Head of the Department of Support and Psychosis, and has many years of experience in the field. Mr. Dani works as a clinical physician at this department and has gained a lot of international experience in the field over the years. We are happy that we are able to present to you a chapter out of the daily lives of patients with schizophrenia and thank the authors for their input.

Last, but not least, we asked Dr. Leila Kozak, from Bastyr University, Kenmore, WA, Dr. Lorin Boynton from the University of Washington, Seattle, WA, Dr. Arushi Sinha from Big Think Media, and Jacob Bentley, MA from Harborview Medical Center and Seattle Pacific University, Seattle, WA (all in the United States) to shed some light upon the cross-cultural differences in schizophrenia, and the way this disease is treated across different countries and cultures. Dr. Kozak has, among other things, done important research in the area of consciousness and health. We have come to know her as a very compassionate and enthusiastic person. She has been an absolute inspiration in the preparation of this book. Dr. Boynton's main interest lies in work with immigrants and refugees, which is why she is an expert in the field of cross-cultural treatments. Apart from the bridge that has to be built between Chinese and Western medicine, we need many more bridges, some of them between practitioners and patients who have different cultural backgrounds. This is why cross-cultural issues need their place in this book as well. Dr. Sinha and Mr. Bentley joined them in order to create a more complete overview. Mr. Bentley is currently completing his doctoral dissertation project examining cross-cultural assessment of trauma and posttraumatic stress disorder (PTSD) in East African populations. Dr. Sinha is a medical anthropologist whose award-winning research focuses on the intersection of technology and healthcare. She is the President of Big Think Media, Inc., a healthcare communications company whose clients include leading nonprofit and biotech organizations. We thank the authors for their input.

For Part II on sleep and related topics we found a very enthusiastic contributor in Prof. Anton Coenen from the Radboud University Nijmegen, The Netherlands. He wrote an introductory chapter on sleep, in particular sleep and schizophrenia. Prof. Coenen has studied sleep during his long and very successful career and we are happy and honored that he decided to share his extensive knowledge with us. Besides being a Professor at the Radboud University Nijmegen, he is a very warm-

hearted person who is always willing to listen, give a hand, or to give advice when needed. He truly is someone to look up to. I (Peggy Bosch) thank him for all his support in my project.

For Chapter 7 we asked Prof. Vadim Rotenberg from Tel Aviv University in Israel to contribute. He has done a lot of work on sleep in schizophrenia, part of which focused on melatonin treatment. We have the highest respect for his work and are very grateful that he accepted our request to write a chapter in the book, and we trust that you will all read it with the same enthusiasm that we felt when we received it. This chapter gave us all great ideas for cooperation, and we would like to express the wish that it may be fruitful and lasting.

In Part III, on acupuncture (TCM), we found it necessary first to introduce our Western readers who may be less experienced with TCM to the Chinese ideas behind acupuncture. We decided to ask two practitioners who have been teaching acupuncture to Western people for a long time. The first of these introductory chapters was written by Ms. LiPing Han, MB, the teacher that introduced me (Peggy Bosch) to the fascinating study of Chinese herbs. She truly knows a great deal about diagnostics and, in my opinion, about teaching. Even though most of the class did not understand a word of Chinese, she was able to introduce us to the remarkable world of Chinese herbs, which she combined with a profound knowledge of TCM diagnostics.

Chapter 9 concerns the philosophy behind TCM, which is a topic that deserves a place in this book in order to explain a bit further the complexities and fascinating aspects behind TCM. This chapter was written by Dr. Stan Switala, who is, in my (Peggy Bosch) personal opinion, one of the most inspiring and stimulating teachers I have ever had. He introduced me to TCM and, after some lessons with him, complex theories suddenly seemed logical and easy to comprehend. We hope that this chapter has the same effect on our readers.

To make clear what modalities are used at this moment in acupuncture research and practice, we asked Prof. Brigitte Ausfeld-Hafter from the University of Bern, Switzerland, to cooperate with us. Prof. Ausfeld-Hafter is an influential researcher and teacher; moreover, she is an absolute expert on laser acupuncture. We are very grateful to have her on the team and would like to express the wish to cooperate more closely, as was planned from our first meeting on.

We found that it was necessary to add two chapters on more recent Western research on acupuncture. Chapter 11 is a review of neuroimaging results on acupuncture, written by Peggy Bosch, MA, and Dr. Maurits van den Noort.

For Chapter 12 we contacted Prof. Sabine Lim from Kyung Hee University in Seoul, South Korea. Prof. Lim is a researcher who is at the very top of her field. She is especially famous for her work on acupuncture in the treatment of Parkinson's disease, a disease that is related to schizophrenia because of the fact that dopamine levels are disturbed. Chihyoung Son, MD, from the Department of Applied Korean Medicine, Kyung Hee University and Seung Youn, MD, a Diplo-

mate of the American Chiropractic Neurology Board, a Diplomate of the International Board of Applied Kinesiology, Board Certified Teacher of Applied Kinesiology, and connected to the AK Medical/Oriental Medical Integrative Clinic joined Prof. Lim in her work on the chapter. We are proud and honored to have them in the book.

Chapter 13 is the first officially published teamwork by Peggy Bosch, MA, Dr. Maurits van den Noort, Prof. Anton Coenen, and Dr. Bart Ellenbroek (see above). It is the start of an extensive research project on schizophrenia, sleep, and acupuncture at the Radboud University Nijmegen, The Netherlands.

For Chapter 14 we contacted Dr. Yifan Yang, who is internationally known for her books on Chinese herbal medicine and her work on psychological problems in relation to Chinese medicine. She is a teacher, writer, and practitioner and we hold her in high esteem. For this book, she wrote a chapter on acupuncture in psychological disorders and we trust that it will help readers understand more of the Chinese background on which treatments are based.

For Chapter 15 we have the unique opportunity to present to you a chapter by the famous Chinese Professor, Prof. Qing-Zhang Ding, together with two of his colleagues. Prof. Qing-Zhang Ding works at the College of Chinese Medicine at the Hebei Medical Sciences University, China. He is also the executive director of Hebei Jikang hospital, China, and he specializes in the treatment of schizophrenia with TCM. He was the first person to publish on the integration of Western and Chinese diagnosis for schizophrenia. More specifically, he published on several possible Chinese diagnoses that can be seen in the different Western subtypes of schizophrenia and he did this in a Western journal. It is a great honor for us that he agreed to write a chapter in this book. He cooperated with two of his colleagues: Ma Yixiong and Yan Junying, and their chapter was translated by Michael Helme with help of Xin Gong.

For Chapter 16 we found a very enthusiastic team from England: Patricia Ronan, MSc, Dominic Harbinson, Lic.Ac., and Neil Quinton, Lic.Ac., who are doing research on psychosis and acupuncture and are one of the very few research groups that have so far focused on this research in practice (out of China). We are happy to say that we will be cooperating with them in our future research. We hope this might be the start of a great collaboration.

It is our sincere hope that this book will contribute to a continued interest in one of the most promising fields of new research for patients with schizophrenia.

In addition to thanking the authors of the chapters, we would like to acknowledge the contributions of several other people without whose help and assistance this book would not have been published. Our thanks first go to Michael Helme and Xin Gong, who translated Chapter 15 (by Prof. Ding and his colleagues) for us, and furthermore were a source of inspiration and encouragement. In addition, we would like to thank Dominic Harbinson and Patricia Ronan for their help with the editing of some of the chapters.

Moreover, we would like to thank Robert Dimpleby, Christina Sarembe, Gundula von Fintel, and Lisa Bennett at Hogrefe & Huber specifically, for assisting in all stages of the editorial process. We would also like to thank all of the other staff at Hogrefe & Huber, who have helped and advised us.

In this line of acknowledgments, we thank our family and friends for their continuous support and inspiration.

Finally, we wish all our readers pleasure in reading this book. We hope that it will contribute to building a bridge between Eastern and Western medicine because what can not be achieved alone might be achieved when working together . . .

Peggy Bosch and Maurits van den Noort

Note on the Translation of Chinese Medical Terms

The terminology used in this book generally follows that used in the volume *Foundations of Chinese Medicine* (Maciocia, 1989). As in that book, we have decided to translate all Chinese medical terms with the exception of yin, yang, qi, shen, and a small number of others that you will find clearly described in the chapters in the third part of the book (on TCM). We have also continued using capitals when it comes to meridian and Chinese organ names, thereby Liver would refer to the Liver meridian, whereas liver (lower case) would refer to the Western organ. Please note that we have chosen to use the Pinyin names (with Unicode) as well as the Western names for the acupuncture points in order to be as complete as possible.

Reference

Maciocia, G. (1989). *The foundations of Chinese medicine*. London, UK: Churchill Livingstone.

1

An Introduction to Schizophrenia

Hugo A. Jørgensen and Erik Johnsen

Abstract. The present chapter is a condensed introduction to schizophrenia as a severe mental illness. The condition is placed both in a historical and in an updated diagnostic context with regards to the characteristic symptoms and clinical features. The common belief that the occurrence of schizophrenia is the same around the world is challenged by an overt variation in reported incidence and prevalence. Environmental and genetic risk factors are briefly discussed and examples of their interaction given. The changes in brain structure and function are discussed in relation to psychosocial strain and stress and in relation to the stress-vulnerability model considered to be an integrative way of understanding the premises for the functional outcome.

Keywords: schizophrenia, symptoms, epidemiology, risk factors, neuropathology

Schizophrenia (literally: splitting of the mind) is a clinical syndrome with severe psychopathology within several domains including cognition, emotion, and behavior. For more than a hundred years, divergent concepts have been discussed. Today, schizophrenia is classified descriptively according to criteria outlined by either the World Health Organization (1992) or the American Psychiatric Association (1994). The two systems have developed to be quite similar (see Table 1a and Table 1b) but there are some differences.

ICD-10 emphasizes the character of the symptoms and DSM-IV gives weight to course and functional impairment. The present concept(s) of schizophrenia delineates a group of patients that is heterogeneous with respect to the extent of psychopathology, impairment of function and ability to manage a role in society. Some will suffer from one episode and be able to manage their lives after recovery, others will have several relapses with autonomous function in between, but the majority will need treatment and support more or less continuously for the rest of their lives.

The main clinical features consist of delusions, hallucinations, and thought disturbances, often called positive symptoms; and lack of drive, slowness, paucity of speech, blunted emotional responses, and social withdrawal, often called negative

Table 1a. Diagnostic criteria for schizophrenia according to the ICD-10 classification of mental and behavioral disorders.

- 1) thought echo, thought insertion or withdrawal, and thought broadcasting;
- 2) delusions of control, influence, or passivity, clearly referred to body or limb movements or specific thoughts, actions, or sensations; delusional perception;
- 3) hallucinatory voices giving a running commentary on the patient's behavior, or discussing the patient among themselves, or other types of hallucinatory voices coming from some part of the body;
- 4) persistent delusions of other kinds that are culturally inappropriate and completely impossible, such as religious or political identity, or superhuman powers and abilities (e.g., being able to control the weather, or being in communication with aliens from another world);
- 5) persistent hallucinations in any modality, when accompanied either by fleeting or half-formed delusions without clear affective content, or by persistent over-valued ideas, or when occurring every day for weeks or months on end;
- 6) breaks or interpolations in the train of thought, resulting in incoherence or irrelevant speech, or neologisms;
- 7) catatonic behavior, such as excitement, posturing, or waxy flexibility, negativism, mutism, and stupor;
- 8) "negative" symptoms such as marked apathy, paucity of speech, and blunting or incongruity of emotional responses, usually resulting in social withdrawal and lowering of social performance, it must be clear that these are not due to depression or to neuroleptic medication;
- 9) a significant and consistent change in the overall quality of some aspects of personal behavior, manifested as loss of interest, aimlessness, idleness, a self-absorbed attitude, and social withdrawal.

Diagnostic guidelines: One very clear symptom (and usually two if less clear-cut) from any of the groups listed as (1) to (4) above, or symptoms from at least two of the groups listed as (5) to (8), should have been clearly present for most of the time during a period of 1 month or more. Symptoms from group (9) applies only to the diagnosis of simple schizophrenia, and a duration of at least 1 year is required.

The diagnosis of schizophrenia should not be made in the presence of overt brain disease, during states of drug intoxication or withdrawal, or in the presence of extensive depressive or manic symptoms unless it is clear that schizophrenic symptoms antedated the affective disturbance.