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Mind Over Matter, Matter Over Mind?

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***Abstract* – Objectives: To study the extent of psychosomatic education in an integrated medical curriculum.**

Methods: Systematic hot spot examination in 2014/2015 of lectures and curriculum elements of all six academic years.

Results: 4% of the lecture material mention contents meeting the criteria.

Discussion: Due to the lack of comparable studies the comparison with other curricula is not possible. The utilization of psychosomatic medicine as a therapeutic tool appears underestimated.

***Keywords* – Medical Education, Psychosomatic Medicine.**

I. Introduction

If a patient happens to be so unkind to present with unrecognizable symptoms, and refuses to get better with our treatment regime, the answer - after a certain number of frustrating attempts - is clear: it has to be psychosomatic. Maybe our patient even shows signs of an unspecified mood disorder, not unsurprisingly after a long road of diagnostic procedures with negative findings and untreated disorders. So we fill out a referral slip for a psychiatric examination, and a psychiatrist happily examines our patient - by looking at his lab results, knowing that an assortment of illnesses, endocrinological shifts, etc… can cause psychiatric disorders and should be ruled out. The diagnostic road of our patient is prolonged, but could there be a shortcut with the right psychosomatic training.

No physician in modern medicine is able to know everything, but does he even have the chance to? The interaction between body and mind is not an easy topic since it is more ambiguous than cold, hard lab results. It is the impression of the authors that most of the classic psychosomatic contents are taught in the lectures on psychic functions in health and disease, but how does the rest of the curriculum do? In the very first week students hear a lecture specifically about psychosomatic medicine, to show them that there is more than just external factors interacting with the body. It is our opinion that body and mind should not be taught as two single entities affecting each other on certain occasions, but as one unit, where the changing of one cogwheel alters the whole system. We have the luxury of knowing some of the interactions between these two entities, with enough unknown factors, e.g. the role of the gut microbiome, still to be discovered and explored [1]. According to our point of view the process of a psychosomatic diagnosis should never be via exclusion - an approach that is common, expensive, and frustrating for both the physician and the patient. In our understanding the hypothesis "psychosomatic genesis" should run along side the whole diagnostic process, with the worst-case-scenario of this being that we ask ourselves what the mental state of our patient might be, and if this might affect his or her somatic well-being. This being in line with Uexküll [2], who despised the term and the dichotomy it leads to, preferring to use the phrase he coined - "integrated medicine".

II. Aims

This study aims to explore the way psychosomatic medicine is included in the medical curriculum, with psychosomatic medicine defined as the understanding of the way the mind affects somatic functions and vice versa and/or the mind can cause somatic symptoms, and the body psychic symptoms. Particularly the difference between the beginning of the curriculum and the end is of interest. As these lectures become progressively clinical, is the relationship between body and mind still an aspect?

III. Methodology

During the period of the academic term of fall/winter and spring/summer of 2014/15 the available lectures of all six academic years were examined due to any mentioning of the relationship between body and mind and categorized according to

a. the segment in which students came in contact with the subject.
b. if the lectures explicitly had psychosomatic medicine as their subject or if it was just
part of one
c. if psychosomatic medicine was offered as a way of understanding the pathogenesis of
disease or as a diagnostic process
d. if psychosomatic medicine was offered and presented from its therapeutic/treatment
models as well
e. if psychosomatic processes were described as the mind influencing the body or vice versa

IV. Limitations of this Methodology

To what extent lecturers presented psychosomatic links to further literature or to electives was not determinable by reading the presentations. Also the required reading list was not examined by the authors.

V. Results

The whole study of medicine contains 259.5 semester-hours, plus 15 hours of elective courses and 12 weeks of required extracurricular internship. Out of these, 152 academic hours of lectures or seminars, therefore 10.1 semester-hours or roughly 4%, contained at least a mentioning of contents of the defined criteria. The more specific results are presented chronologically referring to

the segment of the curriculum they belong to, with a brief overview about the structure of them:

The first segment contains the first only two semesters of the curriculum, it provides 42.3 semester-hours of lectures. Its goal is to offer students a first confrontation with the question of what it means to be a doctor - or a patient - before delving into the foundation of medicine: biochemistry, physiology, microbiology, anatomy, genetics,... In their very first week of orientation students hear a lecture explicitly about psychosomatic medicine, whilst also hearing about it in often called "soft" subjects as gender medicine, medical psychology, etc… and in physiology lectures of the (neuro-)endocrine system. There is no mentioning of psychosomatic medicine as a therapeutic tool, and the focus is almost solely about the mind influencing the body.

The second segment contains the semester 3 to 8, and for the purpose of this paper should be sub-organized in three more segments. The third semester offers a broad explanation of pathogenesis and pathology, whilst the semesters 4 to 6 are organ-oriented, e.g. the heart, the lungs, the gastro-intestinal-tract,... The semesters 7 and 8 bring it all together, integrate knowledge in the form of blocks such as Public Health, Internal Medicine, Psychic functions in Health and Disease, Surgical Specialties, etc… In total these segments amount to 131.8 semester hours, of which 6.5 meet the above mentioned criteria.

The first subsegment offers very little about psychosomatic medicine. The second one does, with a clear focus on diagnostics and the body influencing the mind. The last subsegment has the most hours as well as mentionings, with a focus more towards the therapeutic side of psychosomatic medicine, as well towards the mind effecting the body. This segment contains several seminars about the medical interview for psychiatric disorders, with one being specifically about the psychogenic element of chronified pain. Students are required to complete an online case presentation and have to answer questions about the underlying condition, before training the art of taking the medical history with a trained actor, whilst being supervised by a psychiatric professional [3].

The last segment consists of two years, with the first year being a rotation of six specific specialties every student has to complete (Psychiatry, Obstetrics/Gynecology, Pediatrics, Intensive Care/Emergency Medicine, Otorhinolaryngology/ Ophtalmology, Neurology), with both a clinical internship and lectures/seminars about the specialty, plus one afternoon per week filled with clinical/diagnostic rounds fostering clinical reasoning and clinical decision-making [4]. In the last year every student has to do internships of respectively 4 months in an internal, a surgical and a chooseable speciality, with the intent of the student to participate in the clinical routine. This last year contains no lectures by the university and is absolved entirely in-hospital, therefore no examination of the role of psychosomatic medicine in the curriculum could be performed.

Year five has 51 semester-hours, of which 1.5 fit the criteria. The majority of them are about diagnostic aspects, but there are more mentionings of the body influencing the mind than vice versa. A clear clinical orientation can be noticed, though the focus is on the diagnostic side. The fifth year has hands-on clinical training in the respective specialties along the seminars and lectures, due to the interpersonal differences of the teaching staff no examination could be done.

In total there are six lectures/seminars explicitly about psychosomatic medicine, with the broader definition that we used. The utilization of psychosomatic medicine as a diagnostic tool was clearly higher in amount than as therapeutic one, with 6.5 semester-hours mentioning it as the former and 1.3 as the latter. The mind influencing the body has three times the mentionings than in reverse. The middle, consisting of the years 3 & 4 have the most content.

As was to be expected, contents become increasingly clinical as the student progresses through the curriculum. Some specialties offered lectures/seminars exclusively on psychosomatic topics, e.g. "Psychocardiology" or "Psychosomatic medicine in pediatric patients", and some specialties had more than others: unsurprisingly Psychiatry, Neurology and Obstetrics and Gynecology (in descending order) as the runner-ups.

VI. Conclusion

To our knowledge no other review of curricula like ours has been undertaken, with the result showing that 4% of the examinable content mentions topics meeting our criteria. Not much data could be found for comparison, one study that asked representatives to estimate the extent of psychosomatic content in the curriculum of American medical universities had a median response of 10% - a number that seems like an exaggeration to the authors, since our criteria appear to be even broader [5].

The usage of psychosomatic medicine as a therapeutic tool seems undervalued - we do not intend to belittle the efforts undertaken, but most of the mentionings stop with using it as a diagnostic tool, simply offering an understanding of the pathogenesis or pathoplastic mechanisms. It is our opinion that with a few targeted questions a physician can get to the core of a psychosomatic diagnosis quite easily, with no need of a referral slip, and might be able to use it as a therapeutic tool without referring the patient.

To its merit the Medical University of Vienna has a broad range of compulsory medical history taking seminars with trained actors. It is our conclusion that one of them should be not only about interviewing a patient with a psychosomatic diagnosis, but also confronting the patient with the hypothesis. The usage as a therapeutic tool for every doctor, not just psychiatrists, seems understated and should in our opinion be taught throughout the curriculum. Teaching and training of clinical reasoning processes could be accompanied by fostering a psycho-somatic attitude [6,7]. Due to current development of diagnostic manuals (DSM5, ICD-11) students should be prepared for the shift from somatoform disorders (ICD-10) to only somatic symptom disorders (DSM5). Although the

neurosciences make rapid progress in clarifying brain-mind mechanisms, the attention has moved away from unconcsious motivational influences on behaviour. On the other hand, clinical expertise including awareness of psychic functions is sought after when consequent clinical decision-making is required [8]. Therefore students should be prepared and a "psychosomatic attitude" reflecting a patient-centred medicine could be taught in case-based seminars from the beginning of the curriculum. Current trends in curricular development focus on several competence based didactic strategies. Focusing competencies, operationalization of general and specific psychosomatic diagnostic and therapeutic competence-variables has to be established.

APPENDIX

Table 1: Example of one semester of analyzed lecture material, with "LE" referring to lecture, "SE" to seminar.

II. Academic year				
3rd Semester				
Module 8 (Illness, causes and clinical presentations)	Multifactorial, polygenetic diseases	2	LE	Segue between genetic and environment associated causation of illness, Behavioural Therapy for adipositas - "Even if genetic you can change it"
Case 1	Herpes	1	LE	Stress as a stimulus for reactivation
Case 2	Tolerance, autoimmunity, allergy	3	LE	Stress as a trigger for an acute manifestation or a first time manifestation of an autoimmune disease
Module 9 (Disease, manifestation and cognition, general pharmacotherapy)	Preparation for clinical reasoning	7,5	SE	Psychosomatic aitiology of dyspnoe (panic attacks, fear, associated psychostructural functioning, heartphobia, depression, hyperventilation), psychogenic cough, mental genesis of chronic fatigue
Line	Clinical communication A	12	SE	Anamnesis of illness causing/-ed and intensifying/-ed environmental and psychosocial factors

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