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Characteristics of Patients Presenting at a University Outpatient Department for Complementary and Integrative Medicine

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Keywords
Complementary medicine · Integrative medicine · Evaluation · Outpatient clinic

Abstract
Background: Complementary and integrative medicine (CIM) is increasingly provided at university outpatient departments (OPDs) in Germany, but its scientific evaluation is sparse. Therefore, we aimed to investigate and evaluate feasibility, patients' characteristics and complaints at a university's CIM-OPD. ***Methods:*** A prospective evaluation included new patients without age restriction. At baseline, and after 6 and 12 months, patients filled out paper questionnaires. Patients rated their mean subjectively perceived severity of the main complaint within the last 7 days on a numerical rating scale (NRS) from 0 = no complaints to 10 = maximum complaints, their perceived resilience capacity in everyday life within the last 7 days (0 = not resilient to 10 = very resilient), and their contentment with the treatment (0 = not content to 10 = very content). Diagnoses were provided by physicians and coded according to the International Statistical Classification of Diseases and Related Health Problems, 10th revision. All data were analyzed descriptively. ***Results:*** During two years, 536 new patients {72.6% response, age (mean ± standard deviation [SD] and range) 49.6 ± 15.8 and 1–86 years, 75.7% female} chose to participate. The most frequent diagnosis groups were neoplasms (C00-C97, *n* = 143, 18.6%) and musculoskeletal diseases (M00-M99, *n* = 137, 17.9%). In *n* = 165 patients (30.8%), more than one diagnosis was provided. In a subgroup of 187 patients, who returned the questionnaire after 6 months, we compared baseline to 6-month values: severity of main complaint (mean ± SD) 5.2 ± 2.6 changed to 3.9 ± 2.6; resilience capacity 5.1 ± 2.6 to 5.6 ± 2.4. After 6 months, respondents rated their contentment with the treatment with (mean ± SD) 7.7 ± 2.6. Data after 12 months (*n* = 113) are comparable to data after 6 months. ***Conclusion:*** Patients of our CIM-OPD had a broad age range, were predominantly female, and suffered mostly from oncologic-related complaints and musculoskeletal diseases. In the responding subgroup after 6 months, patients were content with the treatment. These results should be verified by further prospective evaluations.

Merkmale der Patienten, die Sich in Einer Universitätsambulanz für Naturheilkunde und Komplementäre und Integrative Medizin Vorstellen

Schlüsselwörter
Komplementärmedizin · Integrative Medizin · Evaluation · Ambulanz

Zusammenfassung
Hintergrund: Komplementäre und integrative Medizin (CIM) wird in Deutschland zunehmend in Hochschulambulanzen (OPDs) angeboten, deren wissenschaftliche Evaluation ist jedoch unzureichend. Deshalb war es unser Ziel, die Durchführbarkeit einer Evaluation, die Charakteristika

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und die Beschwerden der Patienten und Patientinnen an einer CIM-ODP zu untersuchen. ***Methoden:*** Eine prospektive Evaluation schloss neue Patienten und Patientinnen ohne Altersbeschränkung ein. Zu Baseline sowie nach sechs und 12 Monaten füllten die Patienten und Patientinnen Papierfragebögen aus. Die Patienten und Patientinnen bewerteten ihre mittlere subjektiv empfundene Schwere der Hauptbeschwerden in den letzten sieben Tagen auf einer numerischen Ratingskala (NRS) von 0 = keine Beschwerden bis 10 = maximale Beschwerden, ihre mittlere subjektiv empfundene Belastbarkeit im Alltag in den letzten sieben Tagen (0 = nicht belastbar bis 10 = sehr belastbar) und ihre Zufriedenheit mit der Behandlung (0 = nicht zufrieden bis 10 = sehr zufrieden). Die Diagnosen wurden von den Ärzten und Ärztinnen gestellt und nach der International Statistical Classification of Diseases and Related Health Problems, 10. Revision, kodiert. Die Daten wurden deskriptiv ausgewertet. ***Ergebnisse:*** Im Laufe von zwei Jahren nahmen 536 neue Patienten und Patientinnen (72.6% Rücklauf, Alter (Mittelwert ± SD und Range) 49.6 ± 15.8 und 1–86 Jahre, 75.7% weiblich) teil. Die häufigsten Diagnosen waren Neoplasmen (C00-C97, *n* = 143, 18.6%) und Erkrankungen des Bewegungsapparates (M00-M99, *n* = 137, 17.9%). Bei *n* = 165 (30.8%) Patienten und Patientinnen wurde mehr als eine Diagnose vergeben. In einer Subgruppe von 187 Patienten und Patientinnen, die den Fragebogen nach 6 Monaten zurücksendeten, verglichen wir die Ausgangs-und 6-Monats-Werte: Schweregrad der Hauptbeschwerden (Mittelwert±SD) 5.2 ± 2.6 veränderte sich zu 3.9 ± 2.6; Belastbarkeit 5.1 ± 2.6 zu 5.6 ± 2.4. Nach sechs Monaten bewerteten die Befragten ihre Zufriedenheit mit der Behandlung mit (Mittelwert±SD) 7.7 ± 2.6. Die Daten nach 12 Monaten (*n* = 113) sind mit den Daten nach 6 Monaten vergleichbar. ***Schlussfolgerung:*** Die Patienten und Patientinnen unserer CIM-OPD hatten eine breite Altersspanne, überwiegend weiblich und litten zumeist unter onkologisch bedingten Beschwerden und Erkrankungen des Bewegungsapparates. Patienten und Patientinnen der nach sechs Monaten antwortenden Subgruppe waren mit der Behandlung zufrieden. Die Ergebnisse sollten durch weitere prospektive Evaluationen verifiziert werden.

Introduction

Integrated primary health care was endorsed by the Declaration of Astana [1]. Complementary medicine includes naturopathy and further comprises a heterogeneous group of diagnostic and therapeutic procedures which can be combined with conventional medicine in the frame of complementary and integrative medicine (CIM) [2, 3]. CIM is often used in Europe [4, 5]. CIM use (33,371 respondents, 21 European countries including Israel) was reported to be associated with female gender, higher educational status, presence of chronic conditions, higher health care utilization, unmet medical needs, and negative opinion of the state of the health care system [6]. In Germany, up to 85% of physicians implement CIM in their treatment strategy [7, 8]. In 2021, about 416,100 actively working physicians practiced CIM in Germany, among them several with CIM qualifications: 17,891 in manual medicine/chirotherapy, 13,044 in acupuncture, and/or 12,615 in naturopathic medicine [9]. This might persist in the future, as results of a cross-sectional study [10] indicated the following: medical students in Berlin have a rather neutral attitude toward CIM, and most could imagine offering CIM to their patients in their future career.

CIM is provided at a few German medical universities at their outpatient departments/clinics (OPDs). Since 2007, the CIM-OPD "Hochschulambulanz für Naturheilkunde" at Campus Mitte, Charité – Universitätsmedizin Berlin, provides interdisciplinary medical care to patients with predominantly chronic diseases and complaints. During the evaluation period, this included prevention and conventional medicine provided by four CIM-trained physicians also specialized in general medicine (two physicians), in internal medicine, and in orthopedic surgery, combined with complementary medicine. The latter included, for example, naturopathy, herbal and complementary drug therapy, nutritional therapy, Chinese medicine, acupuncture, osteopathic medicine, cupping, mind-body medicine, hypnotherapy, counseling on lifestyle behaviors such as exercise, nutrition, stress reduction, nonsmoking, abstinence from alcohol. Until now, patients are outpatients who are mostly referred by their general practitioners. The consultations and treatments were reimbursed partly by statutory or private health insurance or by patients themselves. From the beginning, a combination of research, clinical practice, and teaching was endorsed. Therefore, many high-quality randomized controlled trials, such as on acupuncture [11, 12], acupressure [13], and osteopathic medicine [12, 14], were conducted in the OPD. The designated studies investigated treatment options for chronic conditions including chronic musculoskeletal pain and atopic conditions. Furthermore, in patients with chronic musculoskeletal pain, positive changes in pain, functional ability, and quality of life have been observed along routine osteopathic medicine care at the OPD [15]. We intended to evaluate our clinical practice on a broader scale and to gather first data on patients' characteristics presenting at our university OPD, their complaint development, and their contentment with the treatment development along presentation.

The aim was to investigate and evaluate feasibility, patients' characteristics, complaints, and contentment with the treatment along presentation at our university CIM-OPD. We intended to receive feedback and to continuously improve the medical care and service.

Methods

Design and Setting

A prospective and continuous evaluation of new patients at the CIM-OPD at Campus Mitte, Charité – Universitätsmedizin Berlin, was performed. This was a pseudonymized survey in which patients and their respective parents gave verbal consent and then completed the questionnaire. The survey could not be conducted anonymously, as a follow-up was planned after 6 and 12 months. Patients could withdraw their consent at any time by writing a short email, calling, or simply not returning the questionnaires. The applicable data protection laws and the medical confidentiality were abided by. All assessments were performed in accordance with the Declaration of Helsinki as revised in 2013 [16].

Inclusion and Exclusion Criteria

Newly admitted patients without age restriction were eligible for inclusion. Staff of the performing institute, participants of other studies at our OPD, or patients with insufficient knowledge of German language were not included.

Data Collection and Endpoint Measurements

At our OPD, in house developed paper questionnaires (without validity and reliability testing) on anamnestic details and patients' expectations were routinely filled out on a three-page paper questionnaire within 10–15 min by the patients and recollected by the OPD study nurses before the first physician's visit. Patients got no incentive for filling out the questionnaires. Questionnaires of one page length for the follow-ups after 6 and 12 months were sent out by postal mail, and patients returned the questionnaires in case of consent. Regarding the reminder management for follow-ups, after 6 months, one reminder by postal mail was sent out. Further reminders at 6 months or reminders at 12 months were not sent out.

At baseline, patients first provided sociodemographic data (details provided in Table 1), data on the complaints (as free text), and previous therapies for these complaints (also free text). For further anamnestic details, patients filled in predefined answers.

Additional measurements taken at baseline and after 6 and 12 months were as follows: the average subjectively perceived severity of the main complaint (including any reason for visiting the OPD) within the last 7 days on an 11-point numerical rating scale (NRS, 0 = no complaints, 10 = maximum complaints); the perceived resilience capacity in everyday life within the last 7 days (NRS, 0 = not resilient, 10 = very resilient); the average subjectively perceived well-being within the last 7 days (NRS, 0 = feeling not well, 10 = feeling very well); the frequency of feeling stressed in the past month ("never," "almost never," "sometimes," "often," "mostly").

At baseline, patients rated their expectations regarding the treatment result and, after 6 and 12 months, their perception of the treatment results ("healing," "substantial improvement in symptoms," "modest improvement in symptoms," "no improvement"). After 6 and 12 months, patients rated whether their treatment objectives have been achieved ("no," "yes," "partly") and rated their contentment with the treatment (NRS, 0 = not content, 10 = very content).

Diagnoses were provided by the physicians at baseline and were assessed according to the International Statistical Classification of Diseases and Related Health Problems in its 10th revision (ICD-10). All questionnaires used were self-developed by the authors according to the aims endorsing those of getting feedback and evaluating the work of the OPD. Questions and questionnaires were therefore as concise as possible. The authors estimated changes of one point in the respective NRS scales as clinically relevant, as no minimal clinically important differences (MCIDs) were found in the literature. All data were collected pseudonymously by standardized paper-based questionnaires and entered in the SoSci Survey [17].

Statistical Analysis

The evaluation of the data was quantitative, descriptive, and explorative. We decided against significance testing in this exploratory study, also based on consensus in our epidemiologic teams and the literature [18–21]. The data were analyzed descriptively using mean values, standard deviations (SDs), and absolute and relative frequencies. For missing data, no imputation was performed. Baseline values were calculated for the whole allocated population and for the full analysis set including patients who could also be analyzed at the 6-month follow-up. The number of patients/data analyzed is provided in the result tables. Statistical analyses were performed with IBM SPSS for Mac version 26, IBM SPSS for Windows version 27 [22].

Results

Feasibility of the Evaluation

Between November 6, 2013, and December 14, 2015, of 738 admitted patients, 536 patients (72.6% response) were included. Among the 202 patients not included, 83 patients did not receive a questionnaire (institute staff, participation in other studies, insufficient knowledge of the German language, no compliance, questionnaire forgotten to be provided, Fig. 1). Overall, 187 (34.9%) patients responded after 6 months and 164 (30.6%) patients after 12 months.

For the follow-up questionnaires, patients were reminded once. In response to this, we got 96 replies: 88 patients returned questionnaires and 8 patients did not feel that it was appropriate to fill out a questionnaire on treatment results as they had one consultation appointment and advice "only."

Patients' Characteristics, Complaints, and Contentment with the Treatment

Baseline Data of All Responding Patients (All Available Cases)

Patients were (mean ± SD) 49.6 ± 15.8 years of age with a range from 1 to 86 years with 11 patients younger than 18 years; 406 (75.6%) were female (Table 1). Out of 769 mentioned diagnoses, the most frequent diagnoses by ICD-10 were in groups C00-C97 (neoplasms, n = 143, 18.6%) and M00-M99 (diseases of the musculoskeletal system and connective tissue, n = 137, 17.9%). In n = 165 patients (30.8%), more than one diagnosis was provided. Questionnaires' free-text fields for the counseling and treatment requests, as used at the OPD for clinical purposes, showed limited feasibility for data assessment concerning research purposes. For example, patients communicated complaints related to breast cancer treatment by "cancer," "breast cancer," "chemotherapy," "radiation treatment" and asked mainly for additional treatment options, self-care, and lifestyle modifications for

Table 1. Baseline characteristics of all patients

		Female Mean±SD/ *n* (%)		Male Mean±SD/ *n* (%)		Total *N* = 536 Mean±SD/ *n* (%)
Demographic variables						
Sex		406 (75.7)		130 (24.3)		536 (100)
Age, years	405	49.1±15.4	129	51.2±16.8	534	49.6±15.8
Range		1–81		8–86		1–86
BMI, kg/m^2	376	24.4±9.5	121	25.2±5.2	497	24.6±8.6
Health-related variables						
Number of patients with more than one diagnosis	406	128 (31.6)	130	37 (28.4)	536	165 (30.8)
ICD-10 diagnoses by physician (more than one diagnosis possible)						
A00-B99, certain infectious and parasitic diseases	590	5 (0.8)	179	2 (1.1)	769	7 (0.9)
C00-C97, neoplasms		105 (17.8)		38 (21.2)		143 (18.6)
D50-D90, diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism		5 (0.8)		1 (0.6)		6 (0.8)
E00-E90, endocrine, nutritional and metabolic diseases		45 (7.6)		10 (5.6)		55 (7.2)
F00-F99, mental and behavioral disorders		52 (8.8)		26 (14.5)		78 (10.1)
G00-G99, diseases of the nervous system		42 (7.1)		9 (5.0)		51 (6.6)
H00-H59, diseases of the eye and adnexa		13 (2.2)		4 (2.3)		17 (2.2)
I00-I99, diseases of the circulatory system		25 (4.2)		11 (6.1)		36 (4.7)
J00-J99, diseases of the respiratory system		29 (4.9)		8 (4.5)		37 (4.8)
K00-K93, diseases of the digestive system		48 (8.1)		10 (5.6)		58 (7.5)
L00-L99, diseases of the skin and subcutaneous tissue		22 (3.7)		10 (5.6)		32 (4.2)
M00-M99, diseases of the musculoskeletal system and connective tissue		109 (18.6)		28 (15.8)		137 (17.9)
N00-N99, diseases of the genitourinary system		25 (4.2)		6 (3.4)		31 (4.0)
Q00-Q99, congenital malformations, deformations and chromosomal abnormalities		2 (0.3)		0		2 (0.3)
R00-R99, symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified		46 (7.8)		12 (6.7)		58 (7.5)
S00-T98, injury, poisoning and certain other consequences of external causes		14 (2.4)		1 (0.6)		15 (2.0)
Z00-Z99, factors influencing health status and contact with health services		3 (0.5)		3 (1.7)		6 (0.8)
Severity of main complaint (0–10)[a]	347	5.7±2.5	111	5.5±2.6	458	5.6±2.5
Resilience capacity (0–10)[b]	382	5.0±2.4	120	5.6±2.6	502	5.2±2.5
Well-being (0–10)[b]	378	5.1±2.3	120	5.1±2.4	498	5.1±2.3
Feeling stressed	383		119		502	
Never		7 (1.8)		3 (2.5)		10 (2.0)
Almost never		27 (7.0)		24 (20.2)		51 (10.2)
Sometimes		120 (31.3)		42 (35.3)		162 (32.2)
Often		165 (43.1)		33 (27.7)		198 (39.4)
Mostly		64 (16.7)		17 (14.3)		81 (16.1)
Further anamnestic data						
Nonsmokers	378	324 (85.7)	121	96 (79.3)	499	420 (84.2)
No alcohol consumption	379	136 (35.9)	122	29 (23.8)	501	165 (32.9)
Number of patients performing exercise	380	359 (94.5)	122	104 (85.2)	502	463 (92.2)
Number of patients performing exercise regularly (no definition provided)	380	208 (54.7)	122	58 (47.5)	502	266 (53.0)
Chronic tiredness	354	178 (50.3)	118	42 (35.6)	472	220 (46.6)
Number of patients with sleep disturbances	406	239 (58.9)	130	76 (58.5)	536	315 (58.8)
Number of patients with more than one therapy	403	202 (50.2)	129	66 (51.3)	532	268 (50.5)
Range number of therapies for complaints		0–10		0–8		0–10
Number of patients with more than one medication	403	227 (56.3)	129	63 (48.8)	532	290 (54.5)
Range number of patients with more than one medication		0–10		0–7		0–10
Patients' expectations						
Expectations of the treatment result	377		122		499	
Healing		83 (22.0)		28 (23.0)		111 (22.2)
Substantial improvement in symptoms		249 (66.0)		74 (60.7)		323 (64.7)
Modest improvement in symptoms		44 (11.7)		18 (14.8)		62 (12.4)
No improvement		1 (0.3)		2 (1.6)		3 (0.6)

Values are absolute numbers (*N*), column percentages, or means ± standard deviations (SDs). ICD-10 diagnoses not represented in the sample (H60-H95, O00-O99, P00-P96, V01-Y98) are left out. BMI, body mass index; ICD-10, International Classification of Diseases in its tenth revision. [a]Lower values indicate better status, [b]Higher values indicate better status.

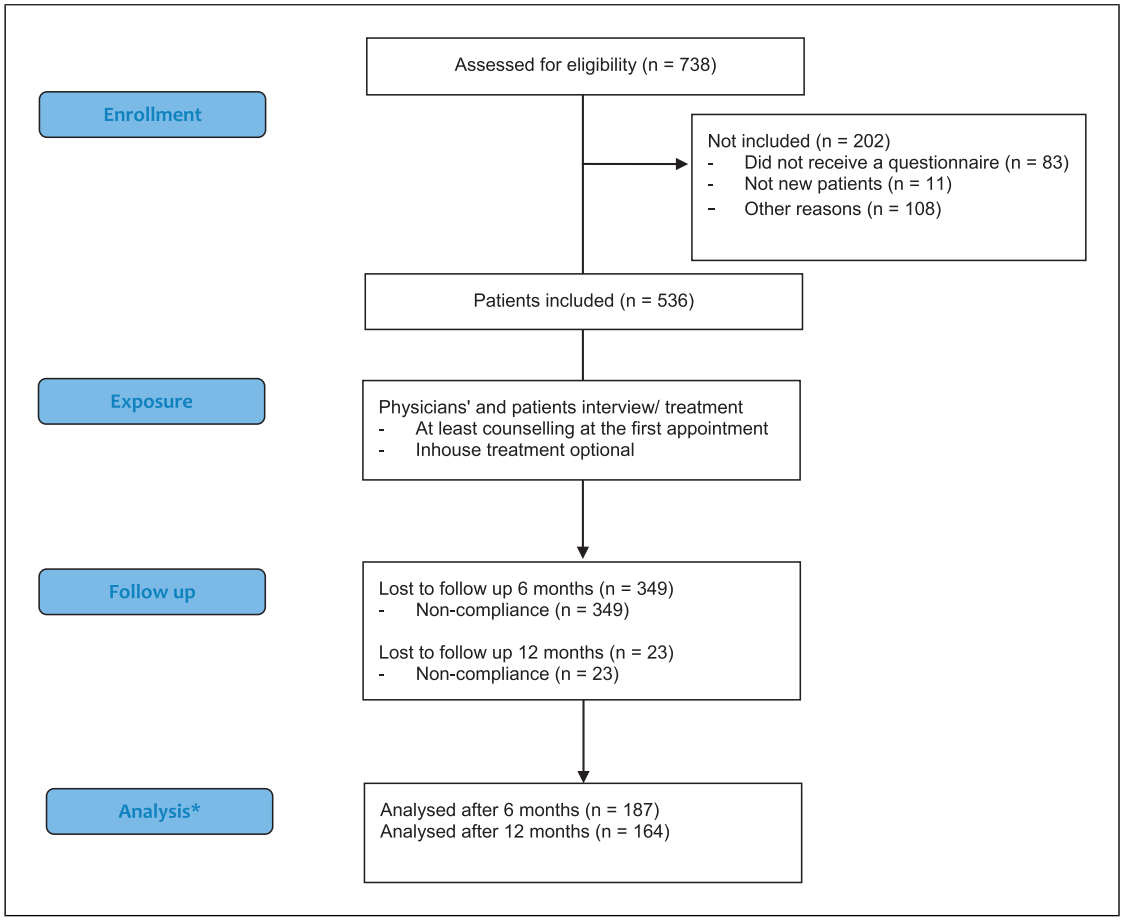

Fig. 1. Patient flow.

coping. To provide some impression concerning the main complaints as provided by patients, we summarized subgroups (Table 2). Regarding patients with neoplasm diagnoses, we had overall n = 132 patients, who had at least one diagnosis in the group C00-C97 (neoplasms). In these 132 patients, their main complaints/requests were as follows: n = 73 patients were asking for additional treatment or advice; n = 28 patients had complaints and requests because of chemotherapy or radiotherapy; n = 5 patients had musculoskeletal pain and discomfort; n = 4 patients complained about sleep disturbance; and n = 4 patients had stomach/intestinal complaints.

Patients rated their average subjectively perceived severity of the main complaint with (mean ± SD) 5.6 ± 2.5, their perceived resilience capacity with 5.2 ± 2.5, and their average subjectively perceived well-being with 5.1 ± 2.3. Most patients felt stressed sometimes (n = 162, 32.2%) or often (n = 198, 39.4%) in the past month, and 220 (46.6%) patients reported self-perceived chronic tiredness. Further, most patients (n = 323, 64.7%) expected a substantial improvement in their symptoms.

Baseline Data Subsample of Patients Who Provided Data after Six Months

In the subsample of 187 patients who provided data after 6 months, few baseline data points were slightly different from the whole sample. Patients were slightly older with (mean ± SD) 53.0 ± 14.8 years of age (range 14–82 years, Table 3). The most frequent diagnoses by ICD-10 were equally in groups C00-C97 (neoplasms, n = 55, 20.4%) and M00-M99 (diseases of the musculoskeletal system and connective tissue, n = 55, 20.4%). In n = 57 patients (30.5%), more than one diagnosis was provided. Most patients expected a substantial improvement in symptoms (n = 111, 65.3%).

Endpoints after 6 and 12 Months

After 6 months, patients of the subsample described above rated the average severity of their main complaint with (mean ± SD) 3.9 ± 2.6, their resilience capacity with (mean ± SD) 5.6 ± 2.4, and their average well-being with (mean ± SD) 5.8 ± 2.3. The baseline to 6-month difference of the average severity of the main complaint is estimated as clinically relevant (no MCID available). Most patients rated their treatment objective as "partly" achieved (n = 101,

55.5%). Patients most often rated a modest improvement (n = 63, 36.4%) and a substantial improvement in symptoms (n = 58, 33.5%), meaning the improvements were lower than expected by patients (Table 3). Patients were content with the treatment (mean ± SD) 7.7 ± 2.6. Results after 12 months were comparable to those after 6 months.

Discussion

Patients' Characteristics, Complaints, and Contentment with the Treatment

Over a 2-year period, 72.6% of newly admitted patients at the CIM-OPD at Campus Mitte, Charité – Universitätsmedizin Berlin, provided baseline characteristics. Patients were (mean ± SD) 49.6 ± 15.8 years of age, mostly female, and presented most often with neoplasms and musculoskeletal diseases. However, only a small group responded to the follow-up questionnaire after 6 (34.9%) and 12 months (30.6%). In the subgroup, who answered the follow-up, the severity of the patients' main complaint seemed to have reduced relevantly; the improvements were lower than expected by patients, and patients' perceived resilience capacity was unchanged. Most patients rated their treatment objective as partly achieved, and patients were content with the treatment. The results persisted in the 12-month follow-up.

To our knowledge, this is the first evaluation of a university CIM-OPD including a broad spectrum of diseases and CIM. We also identified the presentation of the concept of an oncology mind-body medicine day care clinic in Essen, Germany, along with the presentation of two cases [23]. We found evaluations for conventional medical care in various disciplines, such as a hip fracture OPD [24], a virtual urology OPD [25], an OPD in an urban emergency accommodation [26], and an OPD for palliative care [27]. The most frequent diagnosis groups in our OPD were neoplasms and musculoskeletal diseases. This can be explained, as patients with neoplasms often seek CIM advice because they wish to actively contribute to the success and to cope with side effects of cancer treatments [28]. Musculoskeletal diseases are a frequent complaint in primary care. For example, low back pain (ICD-10 M54) was the second most frequent diagnosis in German primary care practices [29]. In Germany, according to the burden of disease study BURDEN 2020 (n = 5,009 adults), a 12-month prevalence for low back pain was reported by 52.9% (55.0% of women surveyed; 48.6% of men surveyed) and for neck pain by 45.7% of participants (54.9% of women; 36.2% of men) [30]. Globally and according to the Global Burden of Disease Study 2019 analysis, approximately 1.7 billion people suffer from musculoskeletal conditions [31]. Patients admitted to our OPD were predominantly female; this is in line with data from the literature as females are more inclined to use CIM [6], health promotion and prevention, and health care in general [29]. Around 91% of women and 84% of men use outpatient medical services within a year [29]. Observed improvements for a variety of complaints along the various treatments in our OPD are not comparable to single treatment strategies as performed in our OPD and described in the literature.

Feasibility of the Evaluation

For the first time, data on patients' characteristics presenting at a CIM-OPD, their course of complaints and symptoms, and their contentment with the treatment were evaluated. The evaluation had an acceptable response rate for baseline values. Due to the relatively high response rate, we consider the characterization of patients seeking CIM at a university OPD to be valid. The evaluation implemented patient-reported outcomes to evaluate changes and effects along with patient treatment. Patients improved over time, but the improvements were overall lower than expected by patients who expected more substantial effects from CIM in overall severe chronic conditions. Our data contribute toward more realistic information of which improvements can be expected at a CIM-OPD. This evaluation provides data and experience (lessons learned) for further research at a university OPD and might serve as a basis for further clinical trials. The main limitation is the high lost to follow-up rate between baseline and follow-ups, as mentioned before. This might impact the validity of the evaluation results, as more content or improved patients might have been more inclined to return the questionnaires. Regarding baseline characteristics, these were quite similar in the full analysis set of patients responding after 6 months and in the whole sample. A further limitation refers to the main complaint and its severity. Patients might have forgotten what their main complaint at baseline was and might have rated a "new" and now more relevant main complaint after 6 and 12 months. Therefore, the observed changes of the main complaint have to be interpreted with caution.

Lessons Learned

In the process of the evaluation, several lessons had to be learned from the challenges presented. To begin with, OPD evaluations should be planned methodologically with care in the same way as all other studies; this refers especially to the early implementation of a statistician for study planning, ethic committee approval, explanation of the importance of a high study adherence of all participants in the informed consent, and patient safety data. We appreciated the need to give priority to the patient care and to use personnel resources economically. Therefore, the questionnaires were also intended to give the patient an opportunity to formulate his or her complaints, to preinform the physician, and to save time to be investigated in thorough physical examinations, treatments (osteopathic medicine, acupuncture, etc.), and for providing advice. Therefore, the questionnaires

Table 2. Baseline grouped free-text main complaint as provided by patients

	Total $N = 536$, n (%)
Musculoskeletal pain and discomfort (including rheumatism, fibromyalgia)	133 (24.8)
Neoplasia	106 (19.8)
Asking for additional treatment, advise	77 (14.4)
Complaints and requests because of chemotherapy or radiotherapy	29 (5.4)
Stomach/intestinal complaints (such as irritable bowel syndrome)	38 (7.1)
Eczema, diseases of the skin and its appendages (neurodermatitis, psoriasis, rosacea, fungal infections, herpes)	22 (4.1)
Obesity/desire for weight reduction	19 (3.5)
Sleep disturbance	16 (3.0)
Tiredness/exhaustion	16 (3.0)
Migraine/headache	15 (2.8)
Arterial hypertension	14 (2.6)
Allergies/intolerances	13 (2.4)
Nicotine dependence/desire to quit smoking	12 (2.2)
Depression	10 (1.9)
Neurological symptoms (paralysis, polyneuropathy, restless leg syndrome, tremor, tics, multiple sclerosis)	8 (1.5)
Sinusitis/allergic rhinitis	7 (1.3)
Bronchial asthma/shortness of breath	7 (1.3)
Unfulfilled desire to have a child	6 (1.1)
Hot flushes/outbreaks of sweating	6 (1.1)
Restlessness with anxiety/anxiety disorder	6 (1.1)
Thyroid gland diseases	6 (1.1)
Dizziness/vertigo	6 (1.1)
Tinnitus	5 (0.9)
Frequent infections (including antibiotic resistance)	5 (0.9)
Gynecological complaints (e.g., endometriosis, menstruation, pain in the lower abdomen)	5 (0.9)
Oral complaints (e.g., painful burning sensation, inflammation, swallowing, teeth)	4 (0.7)
Immune deficiency (diagnosed or perceived)	4 (0.7)
Diabetes mellitus, elevated blood glucose levels	3 (0.6)
Vision impairment	3 (0.6)
Mood complaints (motivation, alterations in mood)	3 (0.6)
Not specified	15 (2.8)
Other	23 (4.3)

were designed to gather clinically relevant anamnestic details by free text. Although the questionnaires' free-text fields for patients' counseling and treatment requests were helpful for the patient-physician treatment session, they were not that useful for data assessment and evaluation, and therefore, we report the diagnoses provided by the physicians. We highly acknowledge the counseling and treatment requests by the patients, but we now strongly advise gathering patients' complaints and any reason for visiting the OPD by making patients fill out choice fields, for example, grouped according to diagnosis groups. This might be accomplished preferably by using online-based questionnaires. Online questionnaires have further advantages to paper questionnaires, as no data transmission or control for imputation errors are necessary, and this might save resources in the OPD. In addition, online-based questionnaires might reduce loss to follow-up. However, a strict reminder management with, for example, two reminders for follow-ups seems to be appropriate. To avoid nonresponses, patients should be informed (written) in advance; follow-ups for consultation and mere advice are also valued contributions to the evaluation. Furthermore, we strongly advise to consider the measurement of the subjectively perceived severity of all complaints as an important endpoint. Therefore, even by changing the main complaint, an overall estimation of complaints' changes is supposed to be feasible. Validated patient-reported outcome measurements with known MCIDs, to enable estimations of relevant improvements and comparison to other research, should be used. Finally, we agree that endpoints across various health domains should be considered in OPDs offering CIM [32].

Conclusion

The evaluation was feasible; patients of our CIM-OPD had a broad age range, were predominantly female, and presented most often with oncologic-related complaints

Table 3. Baseline characteristics and follow-up data for patients providing data after 6 months

		Female *N* = 143 Mean±SD/*n* (%)		Male *N* = 44 Mean±SD/*n* (%)		Total *N* = 187 Mean±SD/*n* (%)
Baseline characteristics						
Sex		143 (76.5)		44 (23.5)		187 (100)
Age, years	143	52.1±14.7	44	55.9±15.1	187	53.0±14.8
Range		14–80		21–78		14–82
BMI, kg/m2	134	25.0±13.7	40	25.0±3.9	174	25.0±12.2
Nonsmokers	135	117 (86.7)	40	34 (85.0)	175	151 (86.3)
No alcohol consumption	135	40 (29.6)	42	12 (28.6)	177	52 (29.4)
Number of patients performing exercise	132	124 (93.9)	41	36 (87.7)	173	160 (92.5)
Number of patients with more than one diagnosis	143	47 (32.9)	44	10 (22.7)	187	57 (30.5)
Baseline and follow-up data						
Severity of main complaint (0–10)[a]						
Baseline	118	5.3±2.5	39	5.1±2.9	157	5.2±2.6
6 months	137	3.9±2.5	43	4.1±2.7	180	3.9±2.6
12 months	82	3.5±2.5	27	3.0±2.5	109	3.4±2.5
Resilience capacity (0–10)[b]						
Baseline	133	4.9±2.4	41	5.7±2.9	174	5.1±2.6
6 months	141	5.3±2.4	44	6.4±2.5	185	5.6±2.4
12 months	85	5.8±2.1	28	6.6±2.7	113	6.0±2.3
Well-being (0–10)[b]						
Baseline	131	5.1±2.1	41	5.2±2.9	172	5.1±2.2
6 months	141	5.8±2.3	44	6.1±2.4	185	5.8±2.3
12 months	85	6.0±2.4	29	6.3±2.7	114	6.1±2.4
Feeling stressed						
Baseline	136		40		176	
Never		3 (2.2)		1 (2.5)		4 (2.3)
Almost never		9 (6.6)		9 (22.5)		18 (10.2)
Sometimes		43 (31.6)		16 (40.0)		59 (33.5)
Often		53 (39.0)		8 (20.0)		61 (34.7)
Mostly		28 (20.6)		6 (15.0)		34 (19.3)
6 months	140		44		184	
Never		1 (0.7)		2 (4.5)		3 (1.6)
Almost never		9 (6.4)		9 (20.5)		18 (9.8)
Sometimes		54 (38.6)		20 (45.5)		74 (40.2)
Often		62 (44.3)		7 (15.9)		69 (37.5)
Mostly		14 (10.0)		6 (13.6)		20 (10.6)
12 months	85		29		114	
Never		2 (2.4)		2 (6.9)		4 (3.5)
Almost never		7 (8.2)		4 (13.8)		11 (9.6)
Sometimes		34 (40.0)		12 (41.4)		46 (40.4)
Often		33 (38.8)		8 (27.6)		41 (36.0)
Mostly		9 (10.6)		3 (10.3)		12 (10.5)
Expectations of the treatment result						
Baseline	129		41		170	
Healing		29 (22.5)		9 (22.0)		38 (22.4)
Substantial improvement in symptoms		84 (65.1)		27 (65.9)		111 (65.3)
Modest improvement in symptoms		16 (12.4)		5 (12.2)		21 (12.4)
No improvement		0		0		0
Treatment result						
6 months	131		42		173	
Healing		5 (3.8)		3 (7.1)		8 (4.6)
Substantial improvement in symptoms		47 (35.9)		11 (26.2)		58 (33.5)
Modest improvement in symptoms		48 (36.6)		15 (35.7)		63 (36.4)
No improvement		31 (23.7)		13 (31.0)		44 (25.4)
12 months	82		25		107	
Healing		8 (9.8)		1 (4.0)		9 (8.4)
Substantial improvement in symptoms		33 (40.2)		8 (32.0)		41 (38.3)
Modest improvement in symptoms		27 (32.9)		11 (44.0)		38 (35.5)
No improvement		14 (17.1)		5 (20.0)		19 (17.8)

Table 3 (continued)

		Female *N* = 143 Mean±SD/*n* (%)		Male *N* = 44 Mean±SD/*n* (%)		Total *N* = 187 Mean±SD/*n* (%)
Treatment objective achieved						
6 months	139		43		182	
No		31 (22.3)		12 (27.9)		43 (23.6)
Yes		26 (18.7)		12 (27.9)		38 (20.9)
Partly		82 (59.0)		19 (44.2)		101 (55.5)
12 months	84		28		112	
No		16 (19.0)		6 (21.4)		22 (19.6)
Yes		24 (28.6)		9 (32.1)		33 (29.5)
Partly		44 (52.4)		13 (46.4)		57 (50.9)
Contentment with the treatment (0–10)[b]						
6 months	136	7.7±2.6	43	7.7±2.7	179	7.7±2.6
12 months	81	7.7±2.8	28	8.4±1.7	109	7.9±2.6

Values are absolute numbers, column percentages, or means ± standard deviations (SDs). BMI, body mass index. [a]Lower values indicate better status. [b]Higher values indicate better status.

and musculoskeletal diseases. In the responding subsample after 6 and 12 months, patients seemed improved and content with the treatment. In the responding subgroup, after 6 months, patients were content with the treatment. The results should be verified by further prospective evaluations.

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Statement of Ethics

Study was approved by a letter by the Ethics Committee, Charité – Universitätsmedizin Berlin, including that written informed consent was not needed in this evaluation of routine care.

Conflict of Interest Statement

The authors certify that there is no conflict of interest with any financial organization regarding the material discussed in the manuscript.

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Author Contributions

Gabriele Rotter (study coordinator) conceived, designed, and coordinated the evaluation, conducted the statistical analysis, interpreted the data, and drafted the manuscript. Sylvia Binting performed the data management, conducted the statistical analysis, interpreted the data, and revised the manuscript. Michael Teut and Miriam Ortiz designed the evaluation and revised the manuscript. Stefan N. Willich conceived the evaluation, contributed to the interpretation of the data, and revised the manuscript. Benno Brinkhaus (principal investigator) conceived and designed the evaluation, contributed to the interpretation of the data, and revised the manuscript. All authors contributed to study methods, have read and approved the final version of the article, and agree with the order of presentation of the authors. All named authors meet the International Committee of Medical Journal Editors (ICMJE) criteria for authorship for this article, take responsibility for the integrity of the work as a whole, and have given their approval for this version to be published.

Data Availability Statement

The datasets used and/or analyzed during the current study are not publicly available due to concerns that the individual privacy of the participants could be compromised. The SPSS codes used for the analyses in the current evaluation will be available from the corresponding author upon reasonable request.

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