Anthroposophic art therapy in chronic disease: A four-year prospective cohort study

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Abstract

Background: Anthroposophic art therapy (painting, clay modeling, music, and speech exercises) is used in 28 countries but has not yet been studied in primary care.

Objective: To study clinical outcomes in patients treated with anthroposophic art therapy for chronic diseases.

Design: Prospective cohort study.

Setting: Fifty-four medical practices in Germany.

Participants and Interventions: One hundred sixty-one consecutive outpatients (primary care: n = 150), aged 5-71 years, were treated by 52 different art therapists.

Main outcome measures: Disease and symptom Scores (physician and patient assessment, respectively, 0-10) and quality of life (adults: SF-36 Health Survey, children: KINDL Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents). Outcomes were measured after 3, 6, 12, 18, and 24 months; SF-36 and Symptom Score were also measured after 48 months.

Results: Most common indications were mental disorders (60.9% of patients, primarily depression, fatigue, and anxiety) and neurological diseases (6.8%). The median number of therapy sessions was 15; median therapy duration was 161 days. All outcomes except KINDL improved significantly between baseline and all subsequent follow-ups. Improvements from baseline to 12 months were: disease score from (mean ± standard deviation) 6.69 ± 1.72 to 2.46 ± 1.90 ($P < .001$), symptom score from 5.99 ± 1.69 to 3.40 ± 2.08 ($P < .001$), SF-36 physical component summary measure from 44.12 ± 10.03 to 48.68 ± 9.47 ($P < .001$), and SF-36 mental component summary measure from 35.07 ± 12.23 to 42.13 ± 11.51 ($P < .001$). All these improvements were maintained until last follow-up.

Conclusion: Patients receiving anthroposophic art therapy had long-term reduction of chronic disease symptoms and improvement of quality of life.

Key words: Anthroposophy, art therapy, fatigue, mood disorders, prospective studies

Introduction

Anthroposophic medicine (AM) was founded in the 1920s by Rudolf Steiner and Ita Wegman.[1] Anthroposophic medicine aims to stimulate patients' salutogenetic capacities and is provided by physicians (counseling, medication) and nonmedical therapists (massage, eurythmy movement, and art therapy).[2]

In AM art therapy (AAT) patients engage in painting, drawing, clay modeling, music or speech exercises.[3] Qualification as an AAT therapist requires six years of training according to an international, standardized curriculum. Anthroposophic art therapy is provided by approximately 2,000 therapists in 28 countries worldwide Brauer D, personal communication, March 2007).

In addition to psychological effects (eg, activation, emotive expression, dialogical communication with the therapist and with the artistic medium),[4,5] AAT can induce physiological effects (for example, AAT speech exercises have effects on heart rate rhythmicity and cardiorespiratory synchronization, which are not induced by spontaneous or controlled breathing alone).[6,7] Observational studies from secondary care suggest that AAT and other AM therapies have clinically relevant effects.[8-18] However, all studies were monocentric, all but two studies[12,14] evaluated a mixture of AM therapies (ie, only some of the patients in these studies had AAT), and all but three studies[9,17,18] had less than 30 AM patients. Here we present a multicenter long-term study of AAT users with a large patient sample.

Methods

Study Design and Objective

This prospective cohort study was part of a research project on the effectiveness and costs of AM therapies in outpatients with chronic disease (Anthroposophic Medicine Outcomes Study, AMOS),[19,20], which was initiated by a health insurance company in conjunction with a health benefit program and included the following effectiveness issues: (1) Are AM therapies in general associated with clinically relevant improvements of chronic diseases?[19] (2) Are specific AM therapies (such as AAT) associated with such improvements? (3) If yes: To what extent are these improvements found in different age, gender, and diagnostic subgroups? (4) How do improvements of specific diagnostic groups compare to improvements with other interventions? Issues 2 and 3 were addressed in this AAT analysis, the objective of which was to study symptoms, quality of life, adjunctive therapies, health service use, adverse reactions, and

therapy satisfaction in outpatients with chronic diseases receiving AAT under routine clinical conditions.

Setting and Participants

Participating physicians and AAT therapists were certified by the Physicians' Association for Anthroposophical Medicine in Germany and the Association for Anthroposophical Art Therapy in Germany, respectively. The physicians recruited consecutive outpatients aged 1-75 years, referred to AAT for any indication (main diagnosis). Exclusion criteria were previous AAT for main diagnosis and ongoing AAT.

Participating physicians (n = 54) did not differ significantly from all AM-certified physicians in Germany (n = 362) regarding gender (63.0% vs 62.2% males), age (mean 45.6 ± 6.2 vs 47.5 ± 7.9 years), number of years in practice (17.9 ± 6.3 vs 19.5 ± 8.7), and the proportion of primary care physicians (87.0% vs 85.0%). Participating therapists (n = 52) did not differ from AAT therapists without study patients (n = 203) regarding gender (78.4% vs 71.4% females), age (mean 47.0 ± 7.3 vs 50.5 ± 9.8 years), or number of years since AAT school graduation (mean 14.1 ± 6.0 vs 15.9 ± 7.2 years).

Outcomes

Clinical outcomes were measured by disease severity – rated on numerical scales from 0 (not present) to 10 (worst possible) – by physician assessment and patient assessment: disease score was the physician assessment of severity of main diagnosis and symptom score was the patient assessment of the first to sixth most relevant symptoms present at baseline. Quality of life was documented by the SF-36 Health Survey (the SF-36 physical component summary measure (PCS), the SF-36 mental component summary measure (MCS), the eight SF-36 scales, and the SF-36 health change item)[21] for adults; and by the KINDL Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents (summary score and four subscales)[22] for children 8-16 years. Disease Score was documented after 0, 6 and 12 months, other clinical outcomes after 0, 3, 6, 12, 18, 24, and (symptom score and SF-36) 48 months.

Other outcomes were adjunctive therapy and health service use in the patient's prestudy year and the first and second study years, including the following items: medication, physician and dentist visits, inpatient hospital and rehabilitation treatment, physiotherapy, ergotherapy, psychotherapy, nonmedical practitioner visits, and sick leave. Therapy ratings and adverse reactions (physician and patient documentation) were also assessed.

Data Collection

All data were documented with questionnaires sent in sealed envelopes to the study office. Physicians documented eligibility criteria and therapists documented AAT administration; remaining items were documented by patients (by caregivers of children < 17 years) unless otherwise stated. Patient responses were not made available to physicians. Physicians were compensated € 40 per patient, while patients received no compensation. Data were entered twice by two different persons into Microsoft Access 97. The two datasets were compared and discrepancies resolved by checking with the original data.

Quality assurance, adherence to regulations

The study was approved by the Ethics Committee of the Faculty of Medicine Charité, Humboldt University Berlin, and was conducted according to the Helsinki Declaration and the International Conference on Harmonisation Good Clinical Practice guidelines. Written informed consent was obtained from all patients before enrollment.

Data Analysis

Data analysis (SPSS 13.0.1, SPSS Inc., Chicago, Ill; StatXact 5.0.3, Cytel Software Corporation, Cambridge, MA) followed the intention-to-treat principle. For continuous data, the two-tailed Wilcoxon signed-rank test and Mann-Whitney *U* test were used; median differences with 95% confidence intervals (95%-CI) were estimated according to Hodges and Lehmann. For binominal data, the two-tailed McNemar test and the Fisher exact test were used. Significance criteria were $P < .05$ and, when 95%-CI was calculated: the 95%-CI does not include 0. Pre-post effect sizes were calculated as standardized response mean and classified as small (0.20-0.49), medium (0.50-0.79), and large (≥ 0.80).[23]

Results

Patient Recruitment and Follow-up

From July 1 1998 to March 31, 2001, physicians screened 196 patients for inclusion; 161 patients were included in the study. Thirty-five patients were not included for the following reasons: patient and physician questionnaire dated > 30 days apart (n = 14), patient questionnaire missing (n = 10), previous or ongoing AAT (n = 6), and other (n = 5). The last patient follow-up ensued on March 30, 2005. Included and not included patients did not differ significantly regarding age, diagnosis, disease duration, baseline disease score, or baseline symptom score. Of included patients, 78% (125/161) were women, as were 97% (33/34) of not included patients ($P = .015$).

General practitioners enrolled 83.2% (134/161) of patients, internists 8.7%, pediatricians 3.1%, and other specialists 5.0%. Physician setting was primary care practice (93.2% of patients, 150/161), referral practice (3.1%, 5/161), and outpatient clinic (3.7%, 6/161).

Follow-up questionnaires were returned by 98.8% (159/161) of patients(returned at least one questionnaire); return rates were 96.3%, 90.1%, 88.2%, 83.3%, 81.3%, and 68.7% after 3, 6, 12, 18, 24, and 48 months, respectively. Respondents and non-respondents of the 12-month questionnaire did not differ significantly regarding age, gender, diagnosis, disease duration, baseline disease score, and baseline symptom score.

Baseline Characteristics

Most main diagnoses, classified by International Classification of Diseases, 10th edition, were F00-F99 Mental Disorders (60.9%, 98/161 patients) and G00-G99 Neurological Diseases (6.8%). Most common diagnosis groups were F30-F39 Mood Disorders (24.2%), F48 Fatigue (13.7%), F41 Anxiety Disorder (5.6%), C00-C97 Malignancies (5.0%), and J45 Asthma (5.0%). Median disease duration was 4.0 (interquartile range [IQR] 1.5-10.0) years. Patients had median 2.0 (IQR, 1.0-3.0) comorbid diseases. Most common comorbid diseases were M00-M99 Musculoskeletal Diseases (18.2%, 55/302 diagnoses), F00-F99 Mental Disorders (15.2%), and C00-D48 Neoplasms (9.6%).

Patients were recruited from 12 of 16 German federal states; 78% (125/161) were women. Mean age was 38.8 ± 15.6 (range, 5-71) years. Compared with the German population,

Table 1. Socio-demographic Data

		Adult Patients, Enrolled After Jan 1, 1999		German population	
		N	%	%	Source, Ref. No
University entrance qualification		73/126	58	19	27
University degree		30/126	24	6	27
Wage earners		2/126	2	18	27
Unemployed during last 12 mo	Economically active patients	7/73	10	10	27
Living alone		25/126	20	21	27
Net family income < 900 € per month		21/105	20	16	27
Alcohol use daily (patients) vs. almost daily (Germany)	Male	0/22	0	28	28
	Female	0/104	0	11	
Regular smoking	Male	5/22	23	37	29
	Female	25/104	24	28	
Sports activity ≥ 1 hour weekly	Age 25-69	54/120	45	39	30
Body mass index < 18.5 (low)	Male	1/22	5	1	31
	Female	11/104	11	4	
Body mass index ≥ 25 (overweight)	Male	8/21	38	56	31
	Female	17/104	16	39	
Permanent work disability pension		16/127	13	3	32
Severe disability status		18/127	14	12	33
Sick leave days in the last 12 months (mean ± SD)	Economically active patients	30.5 ± 59.1 days		17.0 days	34

socio-demographic items were more favorable for education, occupation, alcohol, smoking, and overweight; items were similar for unemployment, low-income, living alone, sports, and severe disability status; and were less favorable for underweight, work disability pension, and sick-leave (Table 1).

Therapies

At enrollment, patients were referred to AAT therapists specializing in painting/clay (60.2%, n = 97/161 patients), speech (31.7%, 50/161) or music (8.7%, 14/161). Anthroposophic art therapy was definitely administered to 91.9% (148/161) of patients; 5.0% did not have AAT; for 3.1% documentation was incomplete. AAT started median 11 (IQR, 0-35) days after enrollment. Median therapy duration was 161 (IQR, 99-252) days, median number of therapy sessions was 15 (IQR, 12-24). During the first six study months, 70.2% (113/161) of patients used AM medication and 3.7% (6/161) had AM eurythmy therapy.

The use of non-AM adjunctive therapies, health services, and sick leave did not change consistently from the prestudy year to the first and second study years, apart from a reduction of physician/dentist visits (from average 22.00 ± 20.67 visits in the pre-study year to 16.56 ± 13.18 visits in the second year, $P = .002$) and of hospitalization (from 5.43 ± 19.29 days to 1.62 ± 4.82 days in the second year, $P = .008$).

For patients with mental disorders (n = 98), the use of psychotherapy (in children, play therapy or ergotherapy) and psychotropic drugs (ATC-Index N05 Psycholeptics, N06 Psychoanaleptics) within the first six study months was analyzed. Of 88 evaluable patients, 8% (n = 7) had at least six psychotherapy sessions, 26% (n = 23) used psychotropic drugs for at least six days, whereas 69% (n = 61) used neither psychotherapy nor psychotropic drugs.

Clinical Outcomes

Disease and symptom scores (Figure 1) and all eleven SF-36 scores (Figure 2) improved significantly between baseline and all subsequent follow-ups. Most improvements occurred during the first six months. After 12-months, disease and symptom scores were improved from baseline in 91.7% and 81.5% of patients, respectively (Table 2); an improvement of ≥ 30% of baseline scores was observed in 85.6% and 65.2%, respectively. Effect sizes for the 0-12 month comparison were large for disease and symptom scores (1.76 and 1.03), and medium (range 0.50-0.69) for all SF-36 scores except physical function (0.43). All these improvements were maintained until the last follow-up. In children aged 8-16 years (n = 20), KINDL scales did not change significantly.

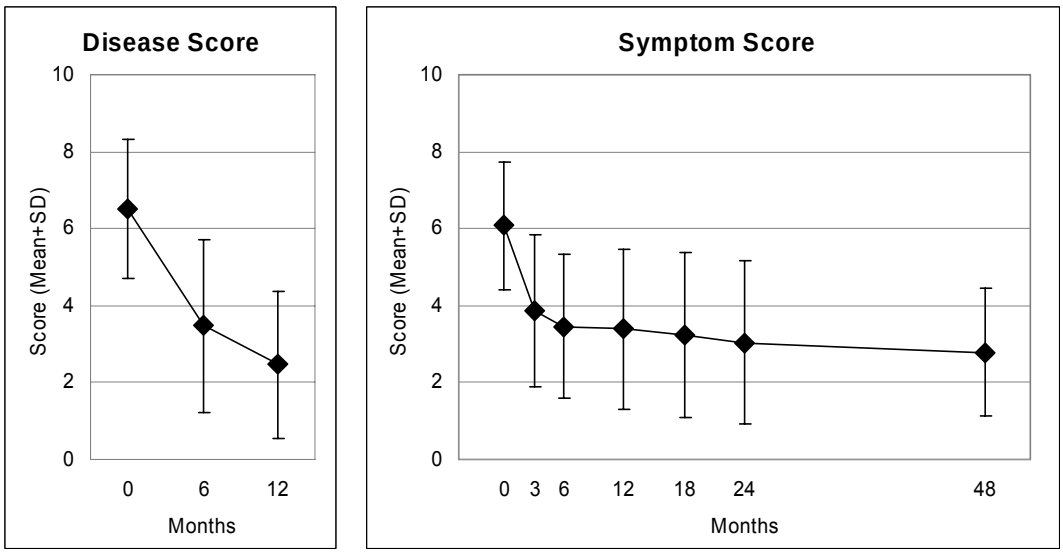

Figure 1. Disease score (physician assessment) and symptom score (patient assessment), 0, not present", 10, worst possible.

Disease and symptom scores improved similarly in all three AAT technique subgroups (painting/drawing/clay, speech, and music, Table 2). Disease score, symptom score, SF-36-PCS, and SF-36-MCS were analyzed in adult males and females, in children (not SF-36), and in diagnosis groups with at least 15 evaluable patients (mood disorders, fatigue). After 12 months, all outcomes in all groups were significantly improved from baseline, except SF-36-PCS in Mood Disorders and Fatigue groups and SF-36-MCS in males.

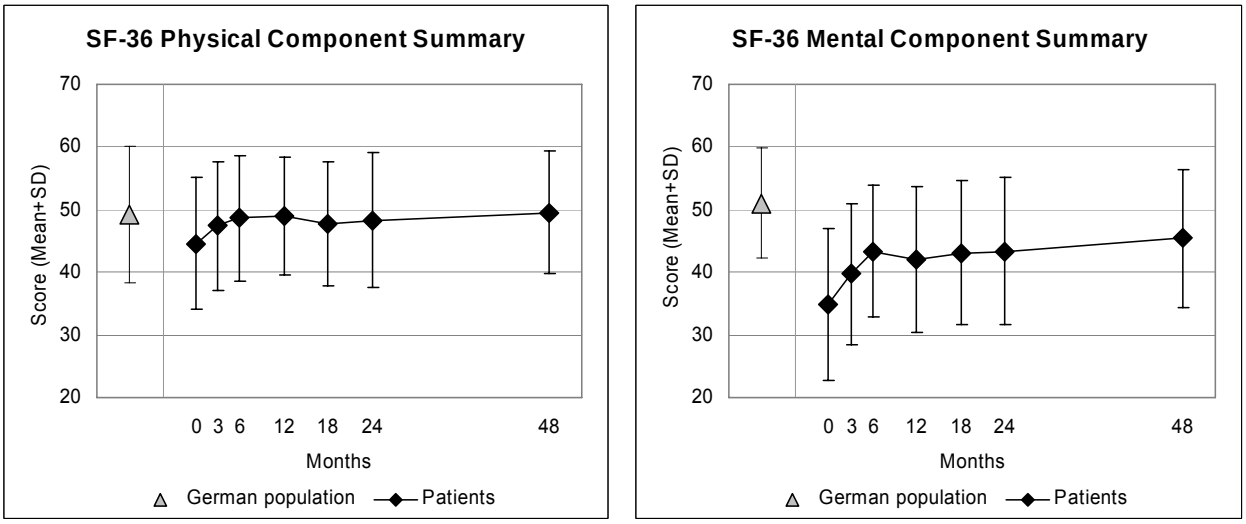

Figure 2. SF-36 Physical and mental component summary measures. Higher scores indicate better health. Adult patients and German population (age 17-74 years)[21].

Three sensitivity analyses were performed for 0-12 month symptom score outcomes. The main analysis comprised all patients with evaluable data at baseline and 12-month follow-up. In the first sensitivity analysis (Table 3, SA1), missing values after 12 months were replaced with

Table 2. Clinical outcomes (0-12 months)

Item	N	0 mo mean	0 mo ±SD	12 mo mean	12 mo ±SD	P Value	Median difference (95%-CI)[a]	Improved %[b]	SRM[c]
Disease score (0-10)									
All AAT patients	97	6.69	±1.72	2.46	±1.90	*P* < .001	4.50 (4.00-5.00)	92	1.76
Painting/drawing/clay	44	6.70	±1.90	2.73	±2.07	*P* < .001	4.00 (3.50 to5.00)	91	1.59
Speech	43	6.79	±1.66	2.23	±1.84	*P* < .001	5.00 (4.00-5.50)	93	1.90
Music	10	6.20	±1.14	2.30	±1.34	*p* = 0.004	4.50 (3.00-5.00)	90	1.98
Symptom core (0-10)									
All AAT patients	135	5.99	±1.69	3.40	±2.08	*P* < .001	2.67 (2.25-3.17)	82	1.03
Painting/drawing/clay	83	6.12	±1.74	3.48	±2.18	*P* < .001	2.67 (2.08-3.33)	81	1.00
Speech	39	5.86	±1.70	3.11	±2.03	*P* < .001	2.83 (2.13-3.70)	82	1.11
Music	13	5.53	±1.25	3.72	±1.56	*P* < .001	2.17 (0.95-3.42)	85	1.13
SF-36 physical component	118	44.12	±10.03	48.68	±9.47	*P* < .001	4.38 (2.81-5.95)	69	0.51
SF-36 mental component	118	35.07	±12.23	42.13	±11.51	*P* < .001	6.92 (4.61-9.44)	71	0.53
SF-36 scales (0-100)									
Physical Function	120	75.75	±24.07	82.85	±22.62	*P* < .001	7.50 (5.00-10.00)	58	0.43
Role Physical	119	40.55	±38.09	69.33	±36.60	*P* < .001	37.50 (25.00-62.50)	60	0.69
Role-Emotional	119	38.94	±41.47	64.01	±40.07	*P* < .001	33.34 (33.33-50.00)	55	0.53
Social Functioning	120	54.7	±26.58	70.21	±25.01	*P* < .001	18.75 (12.50-25.00)	66	0.57
Mental Health	120	51.37	±20.65	62.07	±17.81	*P* < .001	12.00 (8.00-16.00)	72	0.52
Bodily Pain	120	56.39	±28.08	69.69	±23.81	*P* < .001	16.50 (10.50-23.50)	59	0.50
Vitality	120	36.21	±18.10	49.03	±17.66	*P* < .001	15.00 (10.00-17.50)	72	0.60
General Health	120	52.15	±19.52	60.94	±18.27	*P* < .001	8.50 (6.00-12.50)	65	0.52
SF-36 health change[d]	119	3.29	±1.16	2.15	±1.12	*P* < .001	1.50 (1.50-2.00)	66	0.69
KINDL summary score (0-100)	16	61.54	±12.56	71.62	±16.45	*P* = .105	8.9 (-1.88 to +22.36)	63	0.46

CI, confidence interval; SRM, standardized response mean; AAT, anthroposophic art therapy; KINDL, KINDL Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents; SF-36, SF-36 Health Survey

aPositive differences indicate improvement.

bPercentage of patients improved from baseline.

cSRM effect size (small: 0.20-0.49, medium: 0.50-0.79, large: ≥0.80).

dSF-36 Health Change: range from 1 (much better now than one year ago) to 5 (much worse now than one year ago).

Table 3. Symptom Score: Sensitivity Analysis of Outcomes of 0-12 Months

Analysis	N	0 mo mean	0 mo ±SD	12 months mean	12 months ±SD	P value	Median difference (95%-CI)[a]	Improved, %[b]	SRM[c]
Main analysis (patients enrolled after 1.1.1999[c] with evaluable data at 0 and 12 mo)	135	5.99	±1.69	3.40	±2.08	*P* < .001	2.67 (2.25-3.17)	81	1.03
SA1: last value carried forward	150	6.07	±1.66	3.58	±2.09	*P* < .001	2.63 (2.17-3.00)	81	1.02
SA2: patients with disease duration ≥ 12 mo at study entry	105	6.09	±1.71	3.54	±2.15	*P* < .001	2.67 (2.13-3.23)	79	0.95
SA1 + SA2	117	6.16	±1.69	3.69	±2.13	*P* < .001	2.63 (2.17-3.17)	79	0.95
Patients with main diagnosis F00-F99									
Main analysis	82	6.17	±1.65	3.50	±2.20	*P* < .001	2.83 (2.20-3.42)	82	1.05
SA3: patients not using relevant cotherapies[d] in month 0-6	52	6.13	±1.67	2.86	±1.82	*P* < .001	3.50 (2.75-4.15)	90	1.41
SA1 + SA2 + SA3	42	6.31	±1.67	3.04	±1.88	*P* < .001	3.53 (2.65-4.29)	88	1.30

SA, sensitivity analysis; CI, confidence interval; SRM, standardized response mean.

[a]Percentage of patients improved from baseline.

[b]SRM effect size (small: 0.20-0.49, medium: 0.50-0.79, large: ≥0.80).

[c]Symptom Score was not documented in patients enrolled before January 1, 1999.

[d]Relevant cotherapies: see text.

the last value carried forward, reducing the average 0-12 month improvement by 4% (2.59→2.49 points). In the second analysis (Table 3, SA2), the sample was restricted to patients with disease duration of at least 12 months prior to study inclusion, reducing the improvement by 2% (2.59→2.55 points). Combining SA1 + SA2, the improvement was reduced by altogether 5%.

The third analysis (Table 3, SA3) was performed on patients with a main diagnosis of mental disorders. Restricting this sample to patients not using relevant cotherapies during the first six study months (psychotherapy, psychotropic drugs; see above), the average symptom score improvement was increased by 22% (2.67→3.27 points). Combining SA1 + SA2 + SA3, the improvement was again increased by 22% (2.67→3.27 points).

Other Outcomes

Therapy ratings At six-month follow-up, patient average therapy outcome rating (0, no help at all; 10, helped very well) was 7.52 ± 1.95; patient satisfaction with therapy (0, very dissatisfied; 10 very satisfied) was 8.23 ± 1.79. Patient AAT effectiveness rating was positive (very effective or effective) in 86.5% (115/133) of patients, and negative (less effective, ineffective or not evaluable) in 13.5%. Physician effectiveness rating was positive in 77.6% (97/125) and negative in 22.4%. Ratings of therapy outcome, satisfaction, and effectiveness did not differ significantly between adults and children, or between six- and 12-month follow-ups.

Adverse reactions during the first 24 study months Adverse reactions to AAT occurred in two (1.2%) of 161 patients. Both reactions (repeated loss of voice after singing, increased asthma frequency after painting) were of mild intensity. One patient had severe nausea and vomiting after adjunctive AM eurythmy therapy. None of these reactions required therapy discontinuation. Adverse drug reactions occurred more frequently from non-AM medications (13.9%, n = 20/144 users) than from AM medications (2.3%, n = 3/128) ($P < .001$).

Serious Adverse Events during the first 24 study months Three serious adverse events occurred: one death from colon carcinoma; two acute hospitalizations for severe depression and for intestinal perforation after swallowing fish bones, respectively. These events had no relation to any therapy or medication.

Discussion

This is the first study of AAT in primary care. We aimed to obtain information on AAT under routine conditions in Germany and studied patients referred to AAT for chronic diseases. The study was conducted in conjunction with a health benefit program that provided AAT regardless of diagnosis. For this reason, and because the range and frequency of indications for

AAT in outpatient care was largely unknown prior to the study, we included patients of all ages with all diagnoses. Most frequent indication was mental disorders. Following AAT (and adjunctive AM medication in 70% of patients), substantial improvements of disease symptoms and quality of life were observed. Improvements were maintained during the four-year follow-up and were accompanied by a reduction of physician visits and hospitalization.

Strengths of this study include a large patient sample, a long follow-up period, high follow-up rates, and the participation of 17% of all AM-certified physicians and AAT therapists in Germany. The participating physicians and therapists resembled all eligible physicians and therapists with respect to sociodemographics. Furthermore, the screened but not included patients resembled the group of included patients regarding baseline characteristics. These features suggest that our study, to a high degree, mirrors contemporary AAT practice. Moreover, since patients with all diagnoses were included, the study offers a comprehensive picture of AAT practice. On the other hand, it was not feasible to have disease-specific outcomes for all diagnoses included. Nonetheless, the larger Anthroposophic Medicine Outcomes Study project, of which this study is part, included disease-specific outcomes for major disease groups.[24,25]

Another consequence of the broad inclusion criteria is that the mix of diagnoses and age groups in the present study might not be matched if our study should be replicated in other settings. However, future AAT studies will probably not attempt to replicate the present case-mix but focus on individual diagnoses and age groups. Notably, in the present study, symptoms improved significantly in adult males and females, in children, and in evaluable diagnosis groups (mood disorders and fatigue).

A limitation of the study is the absence of a comparison group receiving another treatment or no therapy. Accordingly, for the observed improvements one has to consider several causes apart from AAT. According to sensitivity analysis of symptom score, dropout bias and spontaneous improvement (assumed to be possible in patients with disease duration of less than 12 months) can together explain only 5% of the average 0-12-month improvement. Notably, this analysis does not exclude regression to the mean due to symptom fluctuation with preferential self-selection to therapy and study inclusion at symptom peaks. Other possible confounders are psychological factors like patient expectations and observation bias, AM medication (which was used by 70% of patients), and other adjunctive therapies. Notably, in patients with mental disorders, non-AM adjunctive therapies (psychotherapy and psychotropic drugs) could not explain the improvement, because the improvement was even more outspoken in patients not using such therapies.

Since patients were treated by AM physicians and AAT therapists who could possibly have an interest in AAT having favorable outcomes, study data were largely collected by patients and not physicians. Any bias affecting physician documentation would not affect symptom score or SF-36, since these clinical outcomes were documented by the patients.

Previous studies evaluated AAT in inpatient[8-11,14-18] and outpatient clinics.[12,13,15] All studies had some favorable outcomes; the three largest (range, 60-81 AM patients) found improved quality of life in breast cancer patients;[17] high anorexia nervosa cure rates;[9] and reduced pain, reduced NSAID and muscle relaxant use, and earlier return to work in lumbar disc disease.[18]

In accordance with these findings from secondary care, our primary-care study demonstrated long-standing improvements in symptoms and quality of life. Symptoms improved significantly in all analyzed subgroups.

The most common indication for AAT was mental disorders (depression, fatigue, anxiety). Affecting every fourth adult yearly, mental disorders have substantial negative impact on health, quality of life, and work capacity.[26] Not all patients will profit from standard therapies (psychotropic drugs and psychotherapy); for example, five anxiety patients must take antidepressants for one patient to benefit.[27] Other patients discontinue drugs due to adverse reactions or reject passive drug therapy. Psychotherapy, on the other hand, can be felt as intrusive or too verbal: up to two-thirds of patients scheduled for psychotherapy will either not complete treatment or not respond to it.[28] In this respect, AAT offers an alternative approach, or even a bridge to opening up communication on a verbal level,[2] since in AAT, patients primarily engage in the artistic medium and verbal communication comes secondarily.

In conclusion, for patients where standard therapies do not cure, are not well tolerated or are not preferred, AAT as a non-verbal artistic exercising therapy is a promising treatment option.

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