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Abstract	Both short- and long-term psychotherapies have been shown to be effective for the treatment of patients suffering from mood or anxiety disorders [1–4]. Therapies of the same length have, on average, been found to be equally effective [5]. Short-term therapies, on which most of the studies have concentrated, have generally been found as effective as psychiatric medication and more effective than being on a waiting-list, thus proving that improvement in treatment is not just due to the placebo effect or regression to the mean [6, 7]. Long-term therapies, mostly psychodynamic, although widely used in clinical practice, have been studied to a lesser extent, and, in particular, comparative research on the effectiveness of long-term and short-term therapies is scarce [2, 3, 8]. Furthermore, only a few studies have explored the effectiveness or cost effectiveness of therapies during a long follow-up and with regard to outcomes other than symptoms, such as work ability or social functioning.

Chapter 4
The Helsinki Psychotherapy Study: Effectiveness, Sufficiency, and Suitability of Short- and Long-Term Psychotherapy

Paul Knekt, Maarit A. Laaksonen, Tommi Härkänen, Timo Maljanen, Erkki Heinonen, Esa Virtala, and Olavi Lindfors

Keywords Anxiety disorder • Long-term follow-up • Long-term psychotherapy • Mood disorder • Psychoanalysis • Randomized trial • Repeated measurements • Short-term psychotherapy

Introduction

Both short- and long-term psychotherapies have been shown to be effective for the treatment of patients suffering from mood or anxiety disorders [1–4]. Therapies of the same length have, on average, been found to be equally effective [5]. Short-term therapies, on which most of the studies have concentrated, have generally been found as effective as psychiatric medication and more effective than being on a waiting-list, thus proving that improvement in treatment is not just due to the placebo effect or regression to the mean [6, 7]. Long-term therapies, mostly psychodynamic, although widely used in clinical practice, have been studied to a lesser extent, and, in particular, comparative research on the effectiveness of long-term and short-term therapies is scarce [2, 3, 8]. Furthermore, only a few studies have explored the effectiveness or cost effectiveness of therapies during a long follow-up and with regard to outcomes other than symptoms, such as work ability or social functioning.

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21 Due to their considerably longer duration and more frequent therapy sessions, long-term thera-
22 pies may lead to substantially higher costs than shorter therapies. Short-term therapies, on the other
23 hand, may result in greater need for and implementation of further treatments. However, little is
24 known about the incidence and the determinants of auxiliary psychiatric treatments following the
25 start of short- or long-term psychotherapy. Accordingly, the sufficiency of therapies in the long run
26 needs to be more thoroughly studied from multiple perspectives.

27 One possible reason for insufficient response to treatment, reflected by only minor changes in the
28 patient's state or by the need for and implementation of further treatment, may be a non-optimal
29 treatment choice. Since research on which therapy is the most effective for whom is still scarce and
30 since there is no generally accepted or scientifically proven model of the mechanisms or curative
31 factors underlying psychotherapeutic change [9], factors related to the patient, therapist, and therapy
32 process suggested to affect psychotherapy outcome [10] need to be comprehensively studied. Of the
33 patient-related factors, demographic factors [11, 12], the severity, course, and treatment history of
34 the disorder [12–14], childhood adversities [15], and other psychosocial factors [12, 16] have been
35 considered essential for gauging suitability for psychotherapy and prediction of its outcome. Of the
36 therapist-related factors, demographic as well as professional and personal factors have been thought
37 to affect therapy outcome [17]. Of the factors related to the therapy process, the form and length of
38 therapy [2, 3, 6] and the patient–therapist alliance [18] have been considered particularly important
39 when predicting psychotherapy outcome. However, the knowledge of the mutual importance of the
40 factors related to the patient, therapist, and therapy process is still fragmentary [10].

41 Due to the increasing demand for psychotherapy, healthcare resources need to be allocated more
42 efficiently based on the patient's needs. To reduce inadequate response to treatment and unnecessary
43 costs, research-based information is needed on the potentially relevant selection criteria for treat-
44 ment choice, as well as on the effectiveness of different treatments and stability of the improve-
45 ments, including sustained remission and lack of need for auxiliary treatments. This review of the
46 ongoing Helsinki Psychotherapy Study presents selected results on (1) the effectiveness and proxy
47 efficacy of two short-term and two long-term therapies, (2) the sufficiency of these therapies, and (3)
48 the suitability of the patient and therapist for short-term vs. long-term therapy.

Patients and Methods

Patients

51 A total of 506 eligible outpatients were recruited to the Helsinki Psychotherapy Study (HPS) from
52 psychiatric services in the Helsinki region from June 1994 to June 2000 [19]. Eligible patients were
53 20–45 years of age and had a long-standing disorder causing work dysfunction. They had to meet
54 DSM-IV criteria [20] for anxiety or mood disorders. Patients with psychotic disorder, severe person-
55 ality disorder (DMS-IV cluster – a personality disorder and/or lower level borderline personality
56 organization), adjustment disorder, substance abuse, or organic disorder were excluded, as were
57 individuals who had undergone psychotherapy within the previous 2 years, psychiatric health
58 employees, and persons known to the research team.

59 Of the 506 patients referred to the HPS, 139 refused to participate (Fig. 4.1). Of the remaining
60 367 patients, 97 were randomly assigned to solution-focused therapy (SFT), 101 to short-term psy-
61 chodynamic psychotherapy (STPP), 128 to long-term psychodynamic psychotherapy (LTPP), and
62 41 were self-selected to psychoanalysis (PA). Thus, to ensure a sufficient number of patients in the
63 long-term therapy group, the patients were randomized in a 1:1:1.3 ratio. After assignment to a treat-
64 ment group, participation was refused by seven patients assigned to the brief therapies, 26 assigned
65 to LTPP, and one assigned to PA. Of the 333 patients starting the assigned therapy, a total of 47
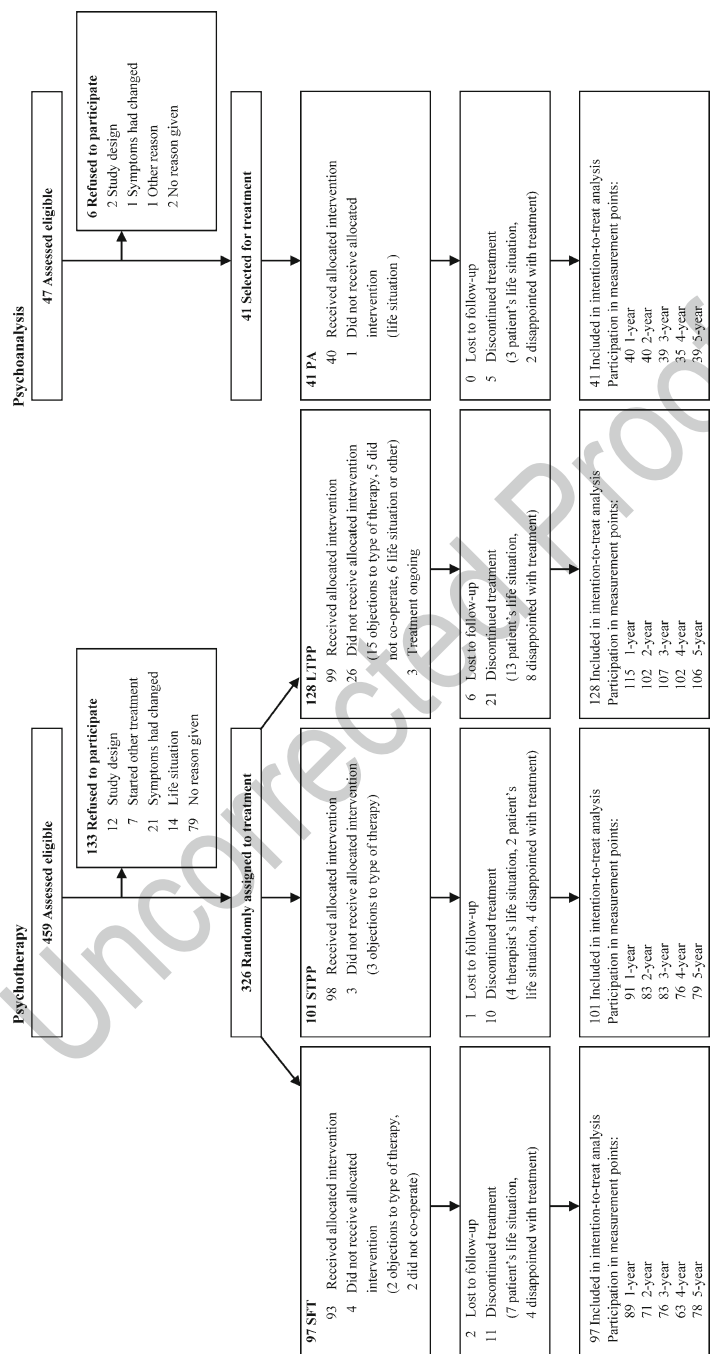
Psychotherapy

459 Assessed eligible

133 Refused to participate
  12 Study design
  7 Started other treatment
  21 Symptoms had changed
  14 Life situation
  79 No reason given

326 Randomly assigned to treatment

Psychoanalysis

47 Assessed eligible

6 Refused to participate
  2 Study design
  1 Symptoms had changed
  1 Other reason
  2 No reason given

41 Selected for treatment

97 SFT
93 Received allocated intervention
4 Did not receive allocated intervention
  (2 objections to type of therapy, 2 did not co-operate)

2 Lost to follow-up
11 Discontinued treatment
  (7 patient's life situation, 4 disappointed with treatment)

97 Included in intention-to-treat analysis
Participation in measurement points:
89 1-year
71 2-year
76 3-year
63 4-year
78 5-year

101 STPP
98 Received allocated intervention
3 Did not receive allocated intervention
  (3 objections to type of therapy)

1 Lost to follow-up
10 Discontinued treatment
  (4 therapist's life situation, 2 patient's life situation, 4 disappointed with treatment)

101 Included in intention-to-treat analysis
Participation in measurement points:
91 1-year
83 2-year
83 3-year
76 4-year
79 5-year

128 LTPP
99 Received allocated intervention
26 Did not receive allocated intervention
  (15 objections to type of therapy, 5 did not co-operate, 6 life situation or other)
3 Treatment ongoing

6 Lost to follow-up
21 Discontinued treatment
  (13 patient's life situation, 8 disappointed with treatment)

128 Included in intention-to-treat analysis
Participation in measurement points:
115 1-year
102 2-year
107 3-year
102 4-year
106 5-year

41 PA
40 Received allocated intervention
1 Did not receive allocated intervention (life situation)

0 Lost to follow-up
5 Discontinued treatment
  (3 patient's life situation, 2 disappointed with treatment)

41 Included in intention-to-treat analysis
Participation in measurement points:
40 1-year
40 2-year
39 3-year
35 4-year
39 5-year

Fig. 4.1 Number of eligible patients who were assigned to study group and completed the protocol

66 patients discontinued the treatment prematurely. The mean length of therapy was 7.5 (SD = 3.0), 5.7
67 (SD = 1.3), 31.3 (SD = 11.9), and 56.3 (SD = 21.3) months in the four treatment groups, respectively.
68 The patients are to be monitored for 10 years following the start of the treatment.
69 Written informed consent was obtained from the patients after giving them a complete descrip-
70 tion of the study. The study protocol was approved by the ethics council of the Helsinki University
71 Central Hospital.

Study Designs

73 The study of effectiveness of the three therapy groups and their sufficiency was carried out as a
74 randomized clinical trial and the comparison of the effectiveness of these groups with the self-
75 selected PA as a quasi-experimental study. The suitability applications, used to predict the effect of
76 patient-, therapist-, and therapy-related factors, were observational cohort studies.

Therapies and Therapists

Therapies

79 SFT is a brief, resource-oriented, goal-focused therapeutic approach which helps clients change by
80 constructing solutions [21]. The orientation was based on an approach developed by de Shazer et al.
81 [22]. The frequency of sessions in SFT was flexible, usually one session every 2 or 3 weeks, up to a
82 maximum of 12 sessions, over no more than 8 months. STPP is a brief, focal, transference-based
83 therapeutic approach which helps patients by exploring and working through specific intrapsychic
84 and interpersonal conflicts. The orientation was based on approaches described by Malan [23] and
85 Sifneos [24]. STPP was scheduled for 20 treatment sessions, with one session per week. LTPP is an
86 open-ended, intensive, transference-based therapeutic approach which helps patients by exploring
87 and working through a broad range of intrapsychic and interpersonal conflicts. Therapy includes
88 both expressive and supportive elements, depending on the patient's needs. The orientation followed
89 the clinical principles of LTPP [25]. The frequency of sessions in LTPP was two to three times a
90 week for approximately 3 years and 240 sessions, on average. PA is an open-ended, highly intensive,
91 transference-based psychodynamic therapeutic approach, which helps patients by analyzing and
92 working through a broad area of intrapsychic and interpersonal conflicts. The therapeutic setting and
93 technique are characterized by facilitating maximum development of transference by the use of a
94 couch and free association for exploring unconscious conflicts, developmental deficits, and distor-
95 tions of intrapsychic structures [26]. The frequency of sessions in PA was four times a week for
96 approximately 5 years, and the expected number of sessions on average 800.

Therapists

98 Psychotherapeutic societies, representing the treatments of interest, were informed of the HPS, lead-
99 ing to a total of 112 eligible therapists volunteering for the study. Eligible therapists were required
100 to have at least 2 years of experience in relevant therapy after completion of their training. The final
101 therapist population comprised 71 therapists, as 41 therapists did not have room for new patients or
102 for some other reason could not attend to clients at the beginning of the study. Altogether, six thera-
103 pists provided SFT, 12 STPP, 41 LTPP, and 30 PA.

All the therapists who provided SFT had been trained for the method and had received a qualification in solution-focused therapy provided by a local institute. All the therapists providing psychodynamic psychotherapy had received standard training in psychoanalytically orientated psychotherapy that was approved by some of the psychoanalytic or psychodynamic training institutes in Finland. Likewise, psychoanalysts had received standard training at a psychoanalytic training institute. During their training, the psychodynamic therapists received a minimum of 3 years' training in psychodynamic psychotherapy and analysts a minimum of 4 years' training in psychoanalytic treatment. Those giving short-term therapy received 1–2 additional years of specific short-term focal psychodynamic therapy training. The mean number of years of experience in the respective therapies was 9 (range 3–15) for SFT, 9 (range 2–20) for STPP, 18 (range 6–30) for LTPP, and 15 (range 6–30) for ~~PSA~~. None of the psychodynamic therapists had any experience of SFT or vice versa. SFT was manualized, and adherence monitoring was performed. Psychodynamic psychotherapies and ~~PSA~~ were conducted in accordance with clinical practice, where the therapists might modify their interventions according to the patient's needs within the respective framework. Accordingly, no manuals were used and no adherence monitoring was organized.

Measurement Methods

Assessment Methods

The assessments were based on interviews and self-report questionnaires conducted at baseline and 14 times (3, 7, 9, 12, 18, 24, 36, 48, 60, 72, 84, 96, 108, and 120 months after baseline) during the 10-year follow-up [19] (Table 4.1). Here, we report results up to a 5-year follow-up. The interviews were conducted by experienced clinical raters. Approved methods were used for assessment of the patients' psychiatric symptoms and diagnosis, the need for post-therapeutic treatment, work ability, personality functions, social functioning, and lifestyle, as well as for assessment of the therapist, the alliance and the therapy process, and cost effectiveness. Thus, a multitude of measures were included to enable a comprehensive evaluation of relevant factors possibly affecting and reflecting different aspects of outcome. Primary outcome measures related to the different domains of outcome were all standardized and validated measures. Depressive symptoms were measured using Beck Depression Inventory (BDI) and Hamilton Depression Rating Scale (HDRS), anxiety symptoms using Symptom Check List, Anxiety Scale (SCL-90-ANX), and Hamilton Anxiety Rating Scale (HARS), and a global assessment of symptoms was performed using Symptom Check List, Global Severity Index (SCL-90-GSI). Three primary working ability measures were used, Work Ability Index (WA), SAS-work, and Perceived Psychological Functioning Scale (Table 4.1).

The Serum Sample Bank

Blood samples were drawn at baseline and at the 36- and 60-month follow-up points. A standard package of laboratory tests was determined. Blood samples from 343 patients were stored at −70°C for potential use in subsequent psychotherapy research.

Qualitative Study

The research interviews at baseline and at the 7, 12, 36, 60, and 84-months measurement points were recorded. Altogether, 1,815 interviews conducted with the 367 patients were recorded. Qualitative

Table 4.1 Assessment methods and times of measurement

	Assessment method and evaluation method[a]		Time of measurement (months)																References
			<0	0	3	7	9	12	18	24	36	48	60	72	84	96	108	120	
t1.3	**Assessment of the patient**																		
t1.4	*Psychiatric diagnosis and symptoms*																		
t1.5	Psychiatric diagnosis (DSM-IV)	I		x															American Psychiatric Association [20]
t1.6	Global Assessment of Functioning Scale (GAF)	I		x		x		x			x	x	x	x	x				American Psychiatric Association [20]
t1.7	Beck Depression Inventory (BDI)	Q		x	x	x	x	x	x	x	x	x	x	x	x			x	Beck et al. [27]; Beck [28]
t1.8	Symptom Check List, Global Severity Index (SCL-90-GSI)	Q	x	x	x	x	x	x	x	x	x	x	x	x	x			x	Derogatis et al. [29]
t1.9	Symptom Check List, Depression Scale (SCL-90-DEP)	Q	x	x	x	x	x	x	x	x	x	x	x	x	x			x	Derogatis et al. [29]
t1.10	Symptom Check List, Anxiety Scale (SCL-90-ANX)	Q	x	x	x	x	x	x	x	x	x	x	x	x	x			x	Derogatis et al. [29]
t1.11	Hamilton Depression Rating Scale (HDRS)	I	x			x		x			x	x	x	x	x				Hamilton [30]; Williams [31]
t1.12	Hamilton Anxiety Rating Scale (HARS)	I	x			x		x			x	x	x	x	x				Hamilton [32]; Bruss et al. [33]
t1.13	Suicidal ideation (one item from HDRS)	I	x			x		x			x	x	x	x	x				Hamilton [30]; Williams [31]
t1.14	Target Complaints (TC)	Q		x		x	x	x		x	x	x	x	x	x			x	Battle et al. [34]
t1.15	Psychiatric Symptoms Questionnaire (PSQ)	Q		x	x	x	x	x	x	x	x	x	x	x	x			x	Knekt and Lindfors [19]
t1.16	*Post-therapeutic treatment*																		
t1.17	Perceived need for post-therapeutic treatment	Q			x	x	x	x	x	x	x	x	x	x	x			x	–
t1.18	Realized post-therapeutic treatment	R, Q			x	x	x	x	x	x	x	x	x	x	x	x	x	x	–
t1.19	*Work ability*																		
t1.20	Work Ability Index (WA)	Q		x		x	x	x	x	x	x	x	x	x	x			x	Tuomi et al. [35, 36]; Ilmarinen et al. [37]
t1.21	SAS-Work (work subscale of SAS-SR)	Q		x	x	x	x	x	x	x	x	x	x	x	x			x	Weissman and Bothwell [38]
t1.22	Perceived Psychological Functioning Scale (PPF)	Q		x		x	x	x	x	x	x	x	x	x	x				Lehtinen et al. [39]
t1.23	Sick leave	Q		x	x	x	x	x	x	x	x	x	x	x	x			x	–
t1.24	Occupational Functioning Scale (OFS)	Q		x		x		x		x	x	x	x	x	x				Hannula et al. [40]
t1.25	Completion of studies	Q		x		x		x		x	x	x	x	x	x				–
t1.26	*Personality functions*																		
t1.27	Quality of Object Relations Scale (QORS)	I		x		x		x		x	x	x	x	x	x				Azim et al. [41]
t1.28	Level of Personality Organization (LPO)	I		x		x		x		x	x	x	x	x	x				Kernberg [42, 43]; Pyykkönen [44]
t1.29	Defense Style Questionnaire (DSQ)	Q		x		x		x		x	x	x	x	x	x			x	Andrews et al. [45]
t1.30	Structural Aspects of Social Behavior (SASB)	Q		x		x		x		x	x	x	x	x	x			x	Benjamin [46]
t1.31	Inventory of Interpersonal Problems (IIP)	Q		x		x		x		x	x	x	x	x	x			x	Horowitz et al. [47]
t1.32	Rorschach Inkblot Method	T		x							x		x						Urist [48]; Exner [49]
t1.33	Suitability for Psychotherapy Scale (SPS)	I		x							x		x						Laaksonen et al. [50]
t1.34	Childhood Family Atmosphere Questionnaire (CFAQ)	Q		x															Kurki [15]
t1.35	Wechsler Adult Intelligence Scale (WAIS-R)	T		x															Wechsler [51]

t1.36	*Social functioning*			
t1.37	Perceived competence	Q	x x x x x x x x x x	Wallston [52]; Smith et al. [53];
t1.38					Härkäpää [54]
t1.39	Life Orientation Test (LOT)	Q	x x x x x	Scheier and Carver [55]
t1.40	Social Adjustment Scale, self-report (SAS-SR)	Q	x x x x x x x x x	Weissman and Bothwell [38]
t1.41	Sense of Coherence scale (SOC)	Q	x x x x x x	Antonovsky [56]
t1.42	Life Situation Survey (LSS)	Q	x x x x x x	Chubon [57]
t1.43	*Lifestyle and somatic health*			
t1.44	Smoking, alcohol consumption, leisure time exercise,	Q	x x x x x	Aromaa et al. [58]
t1.45	body mass index			
t1.46	Serum determinations	L	x x x	–
t1.47	Diseases, hospitalization, use of medication	R, Q	x x x x x x x x x x	–
t1.48	*Health economics data*	R, Q	x x x x x x x x x	–
t1.49	**Assessment of the therapist and the therapy**			
t1.50	Development of Psychotherapists Common Core	Q	x	Orlinsky et al. [59]
t1.51	Questionnaire (DPCCQ)			
t1.52	Psychotherapists' Identity Interview (PII)	I	x	–[b]
t1.53	Working Alliance Inventory (WAI)	Q	x x x x x x	Horvath and Greenberg [60]
t1.54	Psychotherapy Process Assessment (PPA)	I	x x	Knekt and Lindfors [19]

t1.55 [a]*I* interview, *L* laboratory determination, *Q* questionnaire, *R* register, *T* test

t1.56 [b]Pirjo Lehtovuori, personal communications

143 research based on these recordings is carried out to deepen the understanding of the findings of the
144 quantitative research and to further explore the mechanisms of therapeutic change in different patient
145 groups. The research covers evaluation of the effectiveness, sufficiency, and suitability, as well as
146 explorative process and case studies. Multiple qualitative research methodologies are used to discover
147 regularities and to study characteristics of language: content analysis [61], conversation analysis [62, 63],
148 discourse analysis [64], narrative analysis [65], applied psychoanalytic case study [66], and research apply-
149 ing paradigmatic pluralism through combination of qualitative and quantitative methodologies.

Quality Control

151 The quality of the interview data was continuously controlled and evaluated in several separate
152 designs [19]. The two primary foci of the quality-control designs were the evaluation of consistency
153 of the assessments and methodological research, i.e., the evaluation of applicability, comparability,
154 reliability, and validity of the methods used and of the new measures developed in HPS. Agreement
155 between raters and long-term stability of the ratings were evaluated in a sample of 39 video-recorded
156 interviews, rated independently by five psychologists and two psychiatrists at two time points (base-
157 line and 3-year follow-up). Methodological quality-control research comprised several substudies
158 and focused on determining agreement between self-reported and interview-assessed psychiatric
159 symptoms, comparing diagnoses based on semistructured diagnostic interviews [19] and Structured
160 Clinical Interviews for DSM-IV axis I and axis II disorders (SCID) [67, 68], comparing different
161 methods for computing overall indices of symptoms and functional capacity, assessing quality of
162 proxy outcome assessments (PSQ, Table 4.1), evaluating reliability between self-rated and register-
163 based information for the use of psychotropic medication, and assessing symptomatic improvement
164 during waiting time for therapy [69].

Statistical Methods

166 The effectiveness of the four therapies was compared in the "intention-to-treat" (ITT) sample giving
167 the clinical effect of the treatment policy. The data contained repeated measurements of the outcome
168 variables. The primary analyses were based on the assumption of ignorable dropouts. In secondary
169 analyses, missing values were replaced by multiple imputation [70]. In the case of continuous out-
170 come variables, the statistical analyses were based on linear mixed models [71], and in the case of
171 binary outcomes on logistic regression models and generalized estimating equations (GEE [72]).
172 Model-adjusted statistics using predictive margins were calculated for different design points [73,
173 74]. For continuous outcomes, absolute means and their differences, and for binary outcomes, preva-
174 lences and relative risks/odds ratios were estimated. The delta method was applied to calculate
175 confidence intervals [75]. Statistical significance was tested with the Wald test. In the quasi-experi-
176 mental and cohort studies, confounding factors were included in the models.

Results

Description of the Study Population

179 The patients were relatively young and predominantly female (Table 4.2). About half of them were
180 living alone, and about one quarter had an academic education. Over 80% were either employed or
181 students. A total of 85.6% of the patients suffered from mood disorder (82.3% depressive disorder
182 and 66.7% major depressive disorder), 43.1% from anxiety disorder, and 18.3% from personality

Table 4.2 Mean (SD) levels of baseline characteristics of the patients intended to treat

Characteristic	Psychotherapy (N=326)	~~Psycho-analysis~~ (N=41)	P-value for difference	
Socioeconomic variables				t2.4
Age (years)	32.3 (6.9)	30.4 (5.6)	0.09	t2.5
Males (%)	23.9	31.7	0.28	t2.6
Living alone (%)	51.2	61.0	0.24	t2.7
Academic education (%)	25.8	46.3	0.006	t2.8
Employed or student (%)	80.7	87.8	0.27	t2.9
Psychiatric diagnosis				t2.10
Depressive disorder (%)	81.6	87.8	0.33	t2.11
Anxiety disorder (%)	43.6	39.0	0.58	t2.12
Personality disorder (%)	18.1	19.5	0.83	t2.13
Psychiatric comorbidity (%)	42.9	48.8	0.48	t2.14
Psychiatric symptoms				t2.15
Beck Depression Inventory (BDI)	18.3 (7.9)	19.0 (8.0)	0.58	t2.16
Symptom Check List, Global Severity Index (SCL-90-GSI)	1.28 (0.53)	1.34 (0.52)	0.46	t2.17
Symptom Check List, Anxiety Scale (SCL-90-Anx)	1.24 (0.69)	1.30 (0.68)	0.56	t2.18
Hamilton Depression Rating Scale (HDRS)	15.7 (4.8)	15.8 (4.9)	0.87	t2.19
Hamilton Anxiety Scale (HARS)	14.9 (5.2)	16.5 (5.7)	0.08	t2.20
Global Assessment Functioning scale (GAF)	55.2 (7.5)	55.8 (7.3)	0.68	t2.21
Psychiatric history and previous psychiatric treatment				t2.22
First symptoms at age <22 years (%)	61.0	53.7	0.36	t2.23
Psychotherapy (%)	19.3	26.8	0.26	t2.24
Psychotropic medication (%)	22.0	7.7	0.04	t2.25
Hospitalization (%)	1.8	0.0	0.38	t2.26
Personality, social, and work functioning				t2.27
Quality of Object Relations Rating Scale (QORS)	5.13 (0.60)	4.98 (0.66)	0.12	t2.28
Level of Personality Organization (LPO)	4.19 (0.65)	4.14 (0.67)	0.67	t2.29
Defense Style Questionnaire (DSQ), Immature style	3.93 (0.73)	3.88 (0.85)	0.70	t2.30
Structural Analysis of Social Behavior (SASB), introject, weighted affiliation score	5.91 (59.9)	−11.2 (67.0)	0.09	t2.31 t2.32
Inventory of Interpersonal Problems (IIP-64)	86.4 (30.9)	90.0 (33.4)	0.50	t2.33
Sense of Coherence scale (SOC-27)	113 (20.7)	107 (20.6)	0.07	t2.34
Work Ability index (WA)	33.7 (6.9)	32.3 (6.3)	0.21	t2.35
Suitability for psychotherapy (SPS)				t2.36
Modulation of affects (good %)	0.68	0.68	0.98	t2.37
Flexibility of interactions (good %)	0.89	0.95	0.22	t2.38
Self-concept in relation to ego ideal (good %)	0.83	0.71	0.07	t2.39
Reflective ability (good %)	0.82	0.93	0.08	t2.40
Trial interpretation (good %)	0.67	0.88	0.01	t2.41
Motivation (good %)	0.39	0.68	<0.001	t2.42

disorder. Only a few statistically significant differences between the randomized and the PA group with respect to potential confounding factors were found. The proportion of patients with an academic education was higher in the psychoanalysis group. The use of psychotropic medication was much more common in the randomized psychotherapy groups, whereas in the psychoanalysis group, the patients had suggestively a poorer sense of coherence (indicating problems in experiencing life as comprehensible, manageable, and meaningful) and more anxiety symptoms. There was a strong indication of differences in suitability factors between the patients in the psychoanalysis group and those randomized. The patients receiving psychoanalysis more often had worse self-concept in relation to ego ideal (i.e., the self they would desire to have), but they had better reflective ability, reaction to trial interpretation, and motivation than the other patients.

193 *Effectiveness*

194 **Symptoms and Work Ability in the Randomized Trial**

195 Here, the effectiveness of the two short-term psychotherapies and the long-term psychotherapy on
196 psychiatric symptoms (BDI, HDRS, SCL-90-ANX, HARS, and SCL-90-GSI, Table 4.1) and work
197 ability (WA, SAS-work, and PPF, Table 4.1) during a 3-year follow-up from the start of the therapies
198 is presented [2, 3].
199 During the first year of follow-up, patients treated with STPP recovered faster from their psychi-
200 atric symptoms, and patients treated with SFT recovered faster from depressive symptoms than
201 patients receiving LTPP in the total study population ([2], pp. 696–697, Table 4.5). However, after
202 3 years of follow-up, the situation was reversed; a stronger treatment effect in the LTPP both for
203 patients with depressive and anxiety symptoms was found. The differences in effectiveness between
204 short- and long-term therapies were moderate but consistent over all five symptom measures consid-
205 ered. The results were generally similar for patients with diagnosed mood disorder at baseline
206 (Table 4.3). However, for patients suffering from anxiety disorder, statistically significantly faster
207 recovery in the short-term therapy groups was found only for BDI (Table 4.4). Furthermore, a stron-
208 ger treatment effect in the long-term therapy group after 3 years of follow-up was found only in
209 comparison with STPP and for the symptom measures assessed by questionnaires (i.e., BDI, SCL-
210 90-ANX, and SCL-90-GSI).
211 The values of WA and PPF improved more in the short-term therapies than in the long-term psy-
212 chodynamic psychotherapy during the first 7 months of follow-up in the total study population ([3],
213 pp. 102–103, Table 4.4). In accordance with the symptoms observed at the end of the 3-year follow-
214 up, the long-term psychodynamic psychotherapy was slightly more effective than the short-term
215 therapies for all three measures of work ability. The results in the subgroups of patients suffering
216 from mood or anxiety disorder were similar with the exception that LTPP and SFT did not differ
217 statistically significantly from each other for any work ability measure at any time point in the anxi-
218 ety disorder subgroup (Tables 4.5 and 4.6).
219 No statistically significant differences were found between the two short-term therapies at any of
220 the measurement points during the first 3 years of follow-up for any of the symptom or work ability
221 scores in the total study population [2, 3] or in the subgroups of patients suffering at the baseline
222 from mood disorder (Tables 4.3 and 4.5) or anxiety disorder (Tables 4.4 and 4.6).

223 **Cost Effectiveness in the Randomized Trial**

224 Here, economic evaluation of STPP in comparison with SFT during the first year of follow-up is
225 presented. The effectiveness measures used in this evaluation were BDI, HDRS, SCL-90-ANX, and
226 HARS. The primary cost variable used was the direct costs due to the treatment of mental-health
227 problems, but also the indirect costs due to mental-health problems as well as the direct and indirect
228 costs due to somatic disorders were estimated. At no point during the 1-year follow-up were there
229 statistically significant differences between the therapy groups for any of the effectiveness measures
230 ([2], pp. 696–697, Table 4.5), and accordingly, there were no differences in the AUCs. The mean
231 direct costs (expressed at the price level of 2006) due to mental-health problems during the 1-year
232 follow-up period were EUR 1,791 in the STPP group and EUR 2,137 in the SFT group, but this dif-
233 ference was not statistically significant. On the other hand, the mean indirect costs due to mental
234 health problems were nonsignificantly higher in the STPP group than in the SFT group (EUR 3,276
235 vs. EUR 1,985). The direct and the indirect costs accruing from somatic disorders were smaller than
236 those for mental-health problems in both groups, and the differences between STPP and SFT were

Table 4.3 Mean score levels (s.e.) of psychiatric symptoms in treatment groups for patients suffering from mood disorder and mean score differences (95% confidence interval) between the treatment groups

Outcome variable	Time (month)	Mean scores[a] (s.e.)					Mean score difference[b] (95% confidence interval)		
		SFT (N=84)	STPP (N=79)	LTPP (N=113)			SFT vs. LTPP	STPP vs. LTPP	STPP vs. SFT
BDI	0	18.8 (0.8)	19.0 (0.9)	19.8 (0.7)			0	0	0
	7	11.0* (1.0)	11.0* (1.0)	15.0* (0.9)			−3.7 (−6.1, −1.3)	−3.7 (−6.1, −1.2)	+0.0 (−2.5, +2.6)
	12	11.3 (1.1)	9.8 (1.1)	13.3* (0.9)			−1.8 (−4.5, +0.9)	−3.1 (−5.7, −0.5)	−1.3 (−4.2, +1.6)
	24	10.9 (1.3)	9.5 (1.2)	10.3* (1.0)			+0.8 (−2.3, +3.9)	−0.4 (−3.3, +2.5)	−1.2 (−4.5, +2.1)
	36	10.5 (1.1)	10.9 (1.1)	7.5* (0.9)			+3.2 (+0.4, +6.1)	+3.9 (+1.2, +6.5)	+0.6 (−2.4, +3.6)
P-value (time)[a,c]				<.0001					
P-value (group)[b,d]				0.0002					
HDRS	0	16.3 (0.5)	16.4 (0.5)	16.2 (0.4)			0	0	0
	7	11.6* (0.7)	11.1* (0.7)	12.8* (0.6)			−1.2 (−2.9, +0.5)	−1.7 (−3.5, −0.0)	−0.5 (−2.3, +1.3)
	12	11.6 (0.8)	11.1 (0.7)	12.8 (0.7)			−1.2 (−3.1, +0.7)	−1.7 (−3.6, +0.1)	−0.5 (−2.5, +1.5)
	36	11.1 (0.7)	11.4 (0.7)	9.2* (0.6)			+1.8 (−0.0, +3.6)	+2.1 (+0.3, +3.9)	+0.3 (−1.6, +2.2)
P-value (time)[a,c]				<.0001					
P-value (group)[b,d]				0.003					
SCL-90-Anx	0	1.27 (0.08)	1.23 (0.08)	1.20 (0.07)			0	0	0
	7	0.99* (0.09)	0.86* (0.09)	1.04* (0.08)			−0.10 (−0.30, +0.10)	−0.21 (−0.41, −0.01)	−0.11 (−0.32, +0.10)
	12	0.94 (0.09)	0.83 (0.09)	0.94* (0.07)			−0.04 (−0.23, +0.14)	−0.14 (−0.32, +0.05)	−0.09 (−0.29, +0.11)
	24	1.00 (0.09)	0.80 (0.09)	0.78* (0.08)			+0.17 (−0.04, +0.37)	−0.00 (−0.20, +0.19)	−0.17 (−0.39, +0.05)
	36	0.87 (0.08)	0.80 (0.08)	0.59* (0.07)			+0.24 (+0.03, +0.45)	+0.19 (−0.01, +0.39)	−0.05 (−0.27, +0.17)
P-value (time)[a,c]				<.0001					
P-value (group)[b,d]				0.09					
HARS	0	15.1 (0.6)	15.1 (0.6)	15.0 (0.5)			0	0	0
	7	10.9* (0.6)	10.4* (0.6)	11.8* (0.6)			−1.0 (−2.5, +0.6)	−1.4 (−3.0, +0.2)	−0.4 (−2.1, +1.2)
	12	11.0 (0.7)	10.0 (0.7)	11.4 (0.6)			−0.5 (−2.1, +1.2)	−1.4 (−3.1, +0.2)	−1.0 (−2.7, +0.8)
	36	10.5 (0.6)	9.8 (0.6)	8.4* (0.5)			+2.1 (+0.5, +3.7)	+1.4 (−0.2, +3.0)	−0.7 (−2.4, +1.0)
P-value (time)[a,c]				<.0001					
P-value (group)[b,d]				0.01					
SCL-90-GSI	0	1.34 (0.06)	1.30 (0.06)	1.29 (0.05)			0	0	0
	7	0.96* (0.07)	0.91* (0.07)	1.09* (0.06)			−0.15 (−0.31, +0.01)	−0.18 (−0.33, −0.02)	−0.03 (−0.19, +0.14)
	12	0.93 (0.07)	0.81* (0.07)	0.98* (0.06)			−0.09 (−0.24, +0.06)	−0.18 (−0.33, −0.03)	−0.09 (−0.25, +0.08)
	24	1.00 (0.08)	0.84 (0.08)	0.85* (0.07)			+0.11 (−0.07, +0.29)	−0.02 (−0.19, +0.16)	−0.12 (−0.32, +0.07)
	36	0.89 (0.07)	0.84 (0.07)	0.69* (0.06)			+0.17 (−0.00, +0.35)	+0.15 (−0.02, +0.31)	−0.03 (−0.21, +0.16)
P-value (time)[a,c]				<.0001					
P-value (group)[b,d]				0.01					

*A statistically significant change occurred in comparison with the value at the previous time point. Italicized entries have p-values <0.05

[a]Basic model: adjusted for time, treatment group, the difference between theoretical and realized date of measurement, and first-order interaction of time and treatment group

[b]Basic model adjusted for the baseline level of the outcome measure considered

[c]P-value for time difference for the treatment groups combined

[d]P-value for group difference over time

Table 4.4 Mean score levels (s.e.) of psychiatric symptoms in treatment groups for patients suffering from anxiety disorder and mean score differences (95% confidence interval) between the treatment groups

Outcome variable	Time (month)	Mean scores[a] (s.e.)			Mean score difference[b] (95% confidence interval)		
		SFT (N=45)	STPP (N=50)	LTPP (N=47)	SFT vs. LTPP	STPP vs. LTPP	STPP vs. SFT
BDI	0	17.6 (1.2)	17.1 (1.2)	18.3 (1.2)	0	0	0
	7	8.7* (1.2)	9.5* (1.2)	13.3* (1.3)	−4.8 (−7.9, −1.6)	−3.5 (−6.5, −0.5)	+1.2 (−1.7, +4.2)
	12	10.1 (1.5)	9.0 (1.3)	11.1* (1.5)	−1.4 (−5.0, +2.2)	−1.9 (−5.3, +1.6)	−0.5 (−3.9, +3.0)
	24	8.9 (1.7)	10.0 (1.4)	9.6 (1.6)	−0.9 (−5.2, +3.5)	+0.9 (−3.1, +4.8)	+1.8 (−2.4, +5.9)
	36	7.8 (1.4)	8.8 (1.2)	5.0* (1.3)	+2.5 (−1.1, +6.1)	+4.7 (+1.3, +8.1)	+2.1 (−1.3, +5.6)
P-value (time)[a,c]				<.0001			
P-value (group)[b,d]				0.04			
HDRS	0	16.0 (0.8)	14.5 (0.7)	16.5 (0.7)	0	0	0
	7	10.9* (0.9)	10.2* (0.9)	12.8* (0.9)	−2.0 (−4.5, +0.5)	−2.3 (−4.7, +0.2)	−0.3 (−2.6, +2.1)
	12	11.5 (0.9)	9.5 (0.9)	11.4 (1.0)	+0.2 (−2.4, +2.8)	−1.5 (−4.1, +1.0)	−1.7 (−4.2, +0.8)
	36	9.6* (0.9)	8.9 (0.8)	8.8* (0.9)	+1.0 (−1.6, +3.5)	+0.5 (−1.9, +3.0)	−0.5 (−2.9, +2.0)
P-value (time)[a,c]				<.0001			
P-value (group)[b,d]				0.23			
SCL-90-Anx	0	1.60 (0.10)	1.47 (0.10)	1.41 (0.10)	0	0	0
	7	0.99* (0.11)	1.05* (0.11)	1.10* (0.11)	−0.24 (−0.52, +0.04)	−0.10 (−0.37, +0.17)	+0.14 (−0.13, +0.41)
	12	0.98 (0.12)	0.93 (0.11)	0.98 (0.11)	−0.12 (−0.40, +0.15)	−0.09 (−0.35, +0.17)	+0.03 (−0.23, +0.29)
	24	0.97 (0.14)	1.01 (0.12)	0.97 (0.13)	−0.12 (−0.47, +0.23)	−0.00 (−0.32, +0.31)	+0.12 (−0.22, +0.45)
	36	0.77* (0.10)	0.86 (0.09)	0.58* (0.10)	+0.11 (−0.16, +0.39)	+0.27 (+0.01, +0.53)	+0.15 (−0.11, +0.42)
P-value (time)[a,c]				<.0001			
P-value (group)[b,d]				0.44			
HARS	0	17.0 (0.8)	16.1 (0.7)	17.0 (0.8)	0	0	0
	7	11.1* (0.9)	10.9* (0.8)	13.0* (0.9)	−2.0 (−4.4, +0.4)	−1.8 (−4.1, +0.5)	+0.2 (−2.1, +2.4)
	12	11.1 (0.9)	9.8 (0.8)	11.1* (0.9)	−0.0 (−2.5, +2.4)	−1.0 (−3.3, +1.4)	−0.9 (−3.3, +1.4)
	36	9.8 (0.9)	9.0 (0.8)	8.2* (0.9)	+1.6 (−0.8, +4.0)	+1.0 (−1.2, +3.3)	−0.6 (−2.8, +1.7)
P-value (time)[a,c]				<.0001			
P-value (group)[b,d]				0.24			
SCL-90-GSI	0	1.41 (0.08)	1.33 (0.08)	1.43 (0.08)	0	0	0
	7	0.88* (0.09)	0.98* (0.08)	1.08* (0.09)	−0.20 (−0.41, +0.02)	−0.05 (−0.26, +0.16)	+0.15 (−0.06, +0.35)
	12	0.91 (0.09)	0.83* (0.09)	0.98 (0.09)	−0.07 (−0.29, +0.15)	−0.10 (−0.31, +0.11)	−0.03 (−0.24, +0.17)
	24	0.92 (0.11)	0.96* (0.10)	0.92 (0.11)	−0.03 (−0.29, +0.23)	+0.08 (−0.16, +0.32)	+0.11 (−0.14, +0.36)
	36	0.79 (0.09)	0.84 (0.08)	0.64* (0.09)	+0.20 (−0.05, +0.45)	+0.28 (+0.05, +0.52)	+0.09 (−0.15, +0.32)
P-value (time)[a,c]				<.0001			
P-value (group)[b,d]				0.19			

*A statistically significant change occurred in comparison with the value at the previous time point. Italicized entries have p-values <0.05

[a] Basic model: adjusted for time, treatment group, the difference between theoretical and realized date of measurement, and first-order interaction of time and treatment group

[b] Basic model adjusted for the baseline level of the outcome measure considered

[c] P-value for time difference for the treatment groups combined

[d] P-value for group difference over time

Table 4.5 Mean score levels (s.e.) of functional capacity in treatment groups for patients suffering from mood disorder and mean score differences (95% confidence interval) between the treatment groups

Outcome variable	Time (year)	Mean scores[a] (s.e.)			Mean score difference[b] (95% confidence interval)					
		SFT (N=84)	STPP (N=79)	LTPP (N=113)	SFT vs. LTPP		STPP vs. LTPP		STPP vs. SFT	
Work Ability index (WA)	0	33.2 (0.75)	33.6 (0.76)	32.7 (0.64)	0		0		0	
	7	37.2* (0.81)	37.9* (0.82)	35.6* (0.72)	+1.5	(−0.4, +3.4)	+1.9	(+0.0, +3.8)	+0.4	(−1.6, +2.4)
	12	37.0 (0.87)	37.5 (0.85)	36.8 (0.76)	+0.1	(−2.0, +2.2)	+0.3	(−1.8, +2.3)	+0.1	(−2.1, +2.3)
	24	36.7 (0.93)	38.6 (0.87)	39.2* (0.75)	−2.8	(−5.0, −0.6)	−1.1	(−3.2, +1.1)	+1.7	(−0.6, +4.1)
	36	37.1 (0.97)	37.5 (0.92)	39.6 (0.83)	−2.7	(−5.1, −0.3)	−2.6	(−4.9, −0.3)	+0.1	(−2.4, +2.6)
P-value (time)[a,c]				<.0001						
P-value (group)[b,d]				0.002						
SAS-Work	0	2.25 (0.06)	2.21 (0.06)	2.27 (0.05)	0		0		0	
	7	2.04* (0.06)	1.99* (0.07)	2.16 (0.06)	−0.14	(−0.30, +0.02)	−0.15	(−0.31, +0.01)	−0.01	(−0.18, +0.16)
	12	2.01 (0.07)	1.94 (0.07)	2.03 (0.06)	−0.04	(−0.21, +0.12)	−0.07	(−0.23, +0.09)	−0.03	(−0.20, +0.14)
	24	2.00 (0.07)	1.87 (0.07)	1.86* (0.06)	+0.13	(−0.06, +0.31)	+0.03	(−0.14, +0.20)	−0.10	(−0.29, +0.10)
	36	1.92 (0.07)	1.92 (0.07)	1.74* (0.06)	+0.17	(−0.01, +0.35)	+0.22	(+0.04, +0.39)	+0.04	(−0.15, +0.23)
P-value (time)[a,c]				<.0001						
P-value (group)[b,d]				0.05						
Perceived Psychological Functioning scale (PPF)	0	26.0 (0.59)	25.5 (0.60)	25.9 (0.51)	0		0		0	
	7	21.7* (0.72)	20.7* (0.73)	23.3* (0.64)	−1.9	(−3.7, −0.1)	−2.6	(−4.4, −0.8)	−0.7	(−2.6, +1.1)
	12	21.3 (0.72)	20.9 (0.70)	22.1* (0.63)	−1.1	(−2.9, +0.7)	−1.1	(−2.9, +0.6)	−0.0	(−1.9, +1.9)
	24	22.3 (0.83)	20.7 (0.76)	20.1* (0.65)	+2.1	(+0.1, +4.1)	+0.8	(−1.1, +2.8)	−1.2	(−3.4, +0.9)
	36	21.1 (0.67)	20.9 (0.63)	19.1 (0.57)	+1.8	(+0.0, +3.5)	+2.0	(+0.4, +3.7)	+0.3	(−1.5, +2.1)
P-value (time)[a,c]				<.0001						
P-value (group)[b,d]				0.0005						

*A statistically significant change occurred in comparison with the value at the previous time point. Italicized entries have *p*-values <0.05

[a]Basic model: adjusted for time, treatment group, the difference between theoretical and realized date of measurement, and first-order interaction of time and treatment group

[b]Basic model adjusted for the baseline level of the outcome measure considered

[c]*P*-value for time difference for the treatment groups combined

[d]*P*-value for group difference over time

t6.1 **Table 4.6** Mean score levels (s.e.) of functional capacity in treatment groups for patients suffering from anxiety disorder and mean score differences (95% confidence interval) between the treatment
t6.2 groups

	Time (year)	Mean scores[a] (s.e.)			Mean score difference[b] (95% confidence interval)		
Outcome variable		SFT (N=45)	STPP (N=50)	LTPP (N=47)	SFT vs. LTPP	STPP vs. LTPP	STPP vs. SFT
Work Ability index (WA)	0	33.7 (1.03)	33.9 (0.97)	34.5 (1.01)	0	0	0
	7	38.4* (1.00)	38.0* (0.94)	37.5* (1.02)	+1.9 (−0.6, +4.3)	+1.1 (−1.3, +3.4)	−0.8 (−3.1, +1.5)
	12	38.7 (1.04)	38.1 (0.94)	37.9 (1.05)	+1.2 (−1.5, +4.0)	+0.3 (−2.3, +2.9)	−1.0 (−3.5, +1.6)
	24	39.9 (1.17)	38.1 (0.99)	40.6* (1.09)	−0.3 (−3.4, +2.7)	−2.3 (−5.1, +0.4)	−2.0 (−4.9, +0.9)
	36	39.2 (1.04)	38.5 (0.94)	41.7 (1.06)	−2.3 (−5.2, +0.6)	−3.3 (−6.0, −0.6)	−1.0 (−3.7, +1.7)
P-value (time)[a,c]				<0001			
P-value (group)[b,d]				0.15			
SAS-Work	0	2.14 (0.08)	2.05 (0.08)	2.18 (0.08)	0	0	0
	7	1.86* (0.09)	1.93 (0.08)	1.98* (0.09)	−0.16 (−0.37, +0.05)	−0.01 (−0.22, +0.20)	+0.15 (−0.05, +0.35)
	12	1.82 (0.08)	1.85 (0.08)	1.92 (0.09)	−0.10 (−0.32, +0.12)	−0.01 (−0.22, +0.20)	+0.09 (−0.12, +0.30)
	24	1.82 (0.10)	1.86 (0.08)	1.85 (0.09)	−0.04 (−0.31, +0.23)	+0.06 (−0.18, +0.30)	+0.10 (−0.15, +0.35)
	36	1.79 (0.09)	1.76 (0.08)	1.60* (0.09)	+0.20 (−0.04, +0.43)	*+0.23 (+0.00, +0.45)*	+0.03 (−0.19, +0.26)
P-value (time)[a,c]				<0001			
P-value (group)[b,d]				0.59			
Perceived Psychological Functioning Scale (PPF)	0	25.6 (0.74)	24.7 (0.70)	25.0 (0.73)	0	0	0
	7	20.3* (0.89)	20.0* (0.84)	21.8* (0.91)	−2.3 (−4.6, +0.1)	−2.0 (−4.3, +0.2)	+0.2 (−2.0, +2.4)
	12	20.5 (0.83)	20.3 (0.75)	20.7 (0.84)	−0.7 (−2.9, +1.5)	−0.5 (−2.5, +1.6)	+0.2 (−1.8, +2.3)
	24	20.4 (1.05)	21.0 (0.87)	19.8 (0.97)	+0.2 (−2.4, +2.9)	+1.3 (−1.1, +3.7)	+1.0 (−1.4, +3.5)
	36	19.7 (0.80)	20.2 (0.72)	18.0* (0.81)	+1.4 (−0.8, +3.6)	*+2.4 (+0.4, +4.5)*	+1.0 (−1.0, +3.1)
P-value (time)[a,c]				<0001			
P-value (group)[b,d]				0.14			

t6.26 * A statistically significant change occurred in comparison with the value at the previous time point. Italicized entries have p-values <0.05
t6.27 [a] Basic model: adjusted for time, treatment group, the difference between theoretical and realized date of measurement, and first-order interaction of time and treatment group
t6.28 [b] Basic model adjusted for the baseline level of the outcome measure considered
t6.29 [c] P-value for time difference for the treatment groups combined
t6.30 [d] P-value for group difference over time

relatively small. Although no statistically significant differences in respect of effectiveness or costs could be found during the short 1-year follow-up, no firm conclusions can be drawn on whether there is a difference in the cost effectiveness of these two short-term therapies in the long run.

Symptoms and Work Ability in the Quasi-Randomized Study

Including the Psychoanalysis Group

Here, the prediction of psychoanalysis on symptoms and work ability in comparison with that of the three therapies during a 5-year follow-up period is illustrated. The selection of patients for psychoanalysis on the basis of their suitability made the comparison of this group with the three randomized therapy groups potentially prone to confounding. Patients satisfying the four indication criteria (A1–A4), with absence of the five contraindication criteria (B1–B5) presented in Table 4.7, were considered suitable for psychoanalysis [76]. In the present study, both the first indication (criterion A1), and the contraindications for psychoanalysis (criteria B) were acknowledged in all four treatment groups in the selection of patients. The remaining three indication criteria (A2–A4) were covered by the symptom, diagnostic, personality, and functional capacity variables measured at baseline. These criteria variables were included in the statistical models in case they satisfied the criteria for confounding factors in order to adjust the estimates of effectiveness and thus to allow comparison of the psychoanalysis group to the three randomized therapies.

The remission from depressive symptoms and work disability based on analyses including all four therapy groups is presented for the psychodynamic therapies in Figs. 4.2 and 4.3. The ITT analyses showed a higher remission rate in the STPP group after 1 year of follow-up and in the LTPP group after 3 years of follow-up than in the PA group (Fig. 4.2a). At the 5-year follow-up point, STPP was statistically significantly less effective than PA. However, exclusion of the patients using auxiliary treatment during follow-up in the AT analysis changed the results considerably. Neither STPP nor LTPP outperformed PA at the beginning of the follow-up, whereas STPP was less effective during the last 2 years and LTPP was less effective at the 5-year follow-up point than PA (Fig. 4.2b).

Remission from work disability was stronger in the two therapy groups than in the PA group during the first year of follow-up (Fig. 4.3a). However, LTPP was most effective after 3 years of follow-up, and PA after 5 years. After exclusion of auxiliary treatment, STPP was less effective than the longer treatments during the last 2 years of follow-up (Fig. 4.3b). No statistically significant differences between LTPP and PA were seen at any point during follow-up.

Sufficiency

During the 5-year follow-up, the mood-disorder diagnosis was eliminated for about 50% and the anxiety-disorder diagnosis for about 70% of the patients suffering from respective disease at baseline. This recovery may be partly due to auxiliary treatment. As an indicator of sufficiency of the treatments given, we assessed auxiliary psychiatric treatments during and after the study treatments. Auxiliary treatment, defined as regular use of medication (antidepressants, anxiolytics, neuroleptic, or psychiatric combination), the number of therapy sessions (short or long individual, group, couple, or family) or the number of hospital days (psychiatric hospital or other when due to suicide attempt or mental disorder) was measured by questionnaires, interviews, and using nationwide health registers.

t7.1 **Table 4.7** Criteria (indications and contraindications) for suitability for psychoanalysis

	Criteria	Measurement method [a]
t7.3	*A. Indications for psychoanalysis*	
t7.4	1. Response to other psychiatric treatment likely to be inadequate	Assessment interview
t7.5	2. Chronic symptoms reflecting intrapsychic conflict	QORS, DSQ, LPO, SASB, IIP, SOC
t7.6	and developmental arrest	
t7.7	3. Sufficient amount of subjective suffering	DSM-IV, BDI, SCL-90, GAF, WA
t7.8	4. Growth potential (necessary for analyzability)	
t7.9	4.1. Ego strength and object relations	
t7.10	Sufficient ego strength	SPS, LPO, QORS
t7.11	Lack of pathological narcissism	SPS
t7.12	Capacity for modulation of affects and frustration tolerance	SPS, LPO
t7.13	Core conflicts mainly oedipal (neurotic)	LPO
t7.14	Capacity to tolerate therapeutic regression	SPS, LPO
t7.15	Capacity for impulse control	SPS, LPO
t7.16	Adequate integrity of superego	LPO
t7.17	Sufficient level of defense mechanisms	DSQ
t7.18	Flexibility of interaction	SPS
t7.19	Developmental level of object relations	QORS
t7.20	4.2. Psychological mindedness	
t7.21	Good reflective ability	SPS
t7.22	Ability to work with trial interpretation	SPS
t7.23	Motivation for self-exploration	SPS
t7.24	*B. Contraindications for ~~psychoanalysi b~~*	
t7.25	1. Psychiatric diagnosis	DSM-IV
t7.26	Psychotic disorders	
t7.27	Severe personality disorders	
t7.28	2. Ego strength and object relations	
t7.29	Chronic ego defects	SPS, LPO, QORS
t7.30	Pathological narcissism	SPS
t7.31	Very poor ability for modulation of affects and frustration tolerance	SPS, LPO
t7.32	Lack of potential to work analytically	Assessment interview
t7.33	Seriously impaired object relations	QORS
t7.34	3. Psychological mindedness	
t7.35	Very poor reflective ability	SPS
t7.36	Very poor verbalizing ability	Assessment interviews
t7.37	Severe cognitive dysfunctioning	Assessment interviews
t7.38	4. Developmental factors	
t7.39	Very severe early trauma and deprivations	Assessment interview
t7.40	5. Life situation	
t7.41	Severe life crisis	Assessment interviews

t7.42 [a]*Abbreviations*: see Table 4.1

t7.43 [b]Contraindications are usually seen as relative rather than absolute, indicating severely guarded prognosis [76].
t7.44 Patients with such contraindications for psychoanalysis were excluded from the study on the basis of pretreatment
t7.45 assessment interviews and diagnostic evaluations

278   Because of the inclusion criteria, none of the patients used therapy or was hospitalized at base-
279 line, whereas a total of 22% of the patients used psychotropic medication. About 60% of the patients
280 used auxiliary treatment during the 5-year follow-up. Auxiliary treatment was most common in the
281 brief therapy groups (69% in SFT and 74% in STPP) and less common in the LTPP (56%) and PA
282 groups (40%). Auxiliary therapy was more common in the brief therapy groups (47%) than in the
283 LTPP (28%) or PA (25%) groups. This was seen in the individual therapies whereas no notable dif-
284 ferences in the occurrence of other types of therapy were found between the therapy groups.
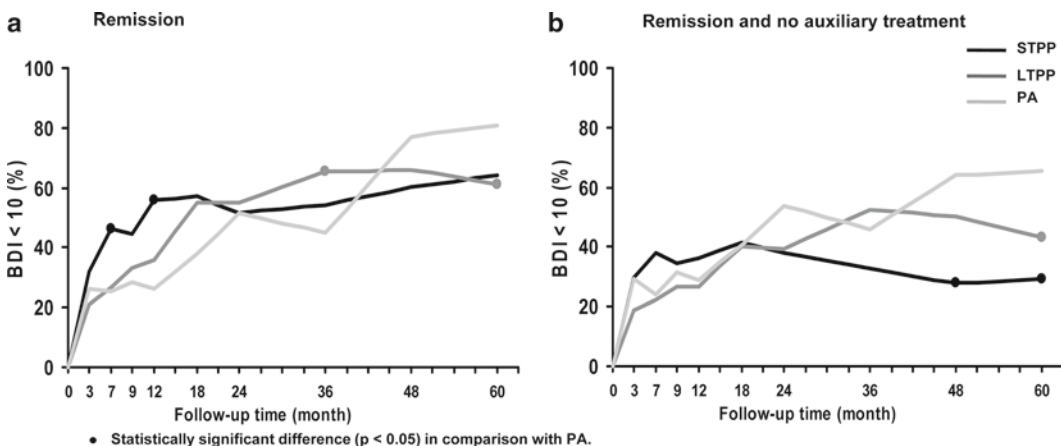
Fig. 4.2 Remission from depressive symptoms (BDI) among patients with BDI≥10 at baseline (*N*=312). (**a**) Remission. (**b**) Remission and no auxilliary treatment
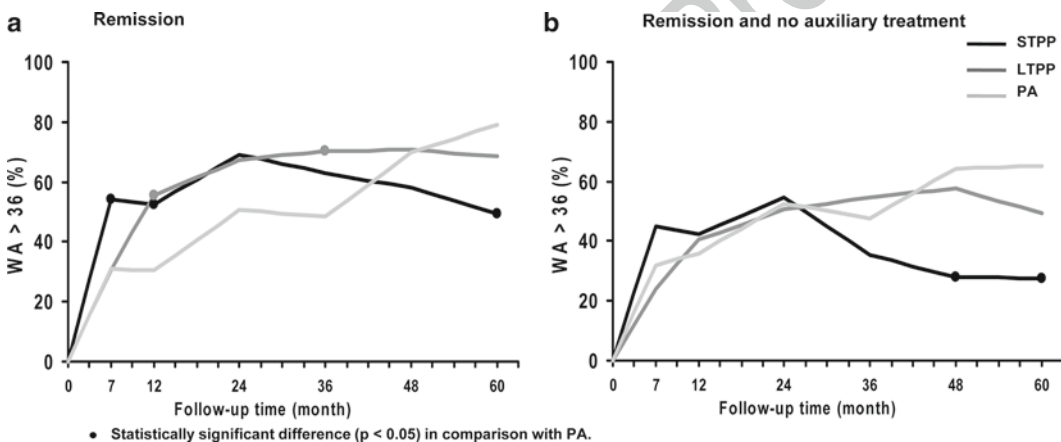

Fig. 4.3 Remission from work disability (*WA*) among patients with WA≤36 at baseline (*N*=235). (**a**) Remission. (**b**) Remission and no auxiliary treatment

The current average number of therapy sessions (four therapies are still ongoing) given by HPS among patients starting the therapy is 9.8 (range = 1–15, SD = 3.3) in the SFT group, 18.5 (range = 4–23, SD = 3.4) in the STPP group, 232 (range = 8–417, SD = 105) in the LTPP group, and 646 (range = 74–1113, SD = 245) in the PA group. After addition of the auxiliary therapies, the average total number of therapy sessions is 60 (range = 3–416), 70 (range = 7–512), 240 (range = 8–447), and 670 (range = 115–1113) in SFT, STPP, LTPP, and PA, respectively. Use of psychotropic medication was most common in the STPP group (61%) and least common in the PA group (33%). Hospitalization due to psychiatric reasons was much more common in both psychodynamic therapy groups (7%) than in the SFT group (1%).

In conclusion, differences in the use of auxiliary psychiatric treatments may suggest specific effects of therapy form and duration. Short-term therapies were more often insufficient than LTPP and PA in assuring sustained improvement, when assessed by the need for additional treatment. Low use of psychotropic medication in the PA group is in accordance with the therapeutic rationale and may reflect adequate holding provided by the intensive therapeutic relationship while high level of

299 medication in the STPP group might be related to insufficiency of the therapy form and length in
300 providing tools to cope with post-therapeutic distresses. Further research is needed to assess ther-
301 apy- and patient-related determinants of treatment use.

302 ## *Suitability*

303 One potential reason for the low sufficiency may be the randomization of patients to the three therapy
304 groups, which possibly leads to a treatment choice that is not optimal for all patients. For this reason,
305 the prediction of patient-, therapist-, and therapy-related factors on the outcome of short- and long-
306 term psychotherapy was assessed to identify the possible optimal circumstances for the treatment. Of
307 the therapy-related factors, information on the form and length of therapy as well as the patient–ther-
308 apist alliance, among other things, is available in the HPS, and results on prediction of the form and
309 length of therapy have already been presented. Of the patient-related factors, patient's demographic
310 factors, psychiatric symptoms and diagnosis, psychiatric history and previous treatment, childhood
311 family atmosphere, social factors, and psychological factors, and of the therapist-related factors,
312 demographic factors, education and experience, and professional and personal characteristics have
313 been measured and can be studied in the HPS. Here, the results on the prediction of the psychological
314 patient factors and the therapist's professional and personal characteristics measured at baseline on
315 patients' symptom development in short- vs. long-term therapy in a 3-year follow-up are presented.

316 ### Psychological Patient Factors

317 In the HPS, a new seven-item Suitability for Psychotherapy Scale (SPS) was constructed. Each of
318 the seven suitability measures (modulation of affects, flexibility of interaction, self-concept in rela-
319 tion to ego ideal, reflective ability, trial interpretation, motivation, and focus) was assessed at a
320 baseline interview on a 7-point scale where low and intermediate values indicated good suitability
321 and high values poor suitability. A cumulative Suitability for Psychotherapy Scale (SPS) score was
322 formed by summing up the seven single dichotomous suitability variables (good suitability = 0 and
323 poor suitability = 1) so that the score varied from 0 to 7. The reliability and validity of the SPS assess-
324 ments made by seven individual raters were evaluated. The reliability, evaluated through both the
325 agreement between and repeatability of the interviewers' assessments, was found to be fair or good
326 [50]. An association of the SPS with personality functions but not with psychiatric symptoms sup-
327 ported criterion and discriminating validity. The SPS also significantly predicted changes in symp-
328 toms (SCL-90-GSI) during follow-up irrespective of baseline symptom level [77]. Three patient
329 groups with different outcome prognosis were found when the SPS score was used to predict symp-
330 tom development in a 3-year follow-up: patients with more good than poor values (score values 0–3)
331 gained sufficiently from short-term therapy, patients with mostly poor values (score values 4–6)
332 needed long-term therapy to recover, and patients for whom all seven values were poor (score value
333 7) failed to benefit from either short- or long-term therapy (Fig. 4.4). The SPS can be reliably applied
334 before start of treatment to predict the amount of therapy needed to recover and can thus be used as
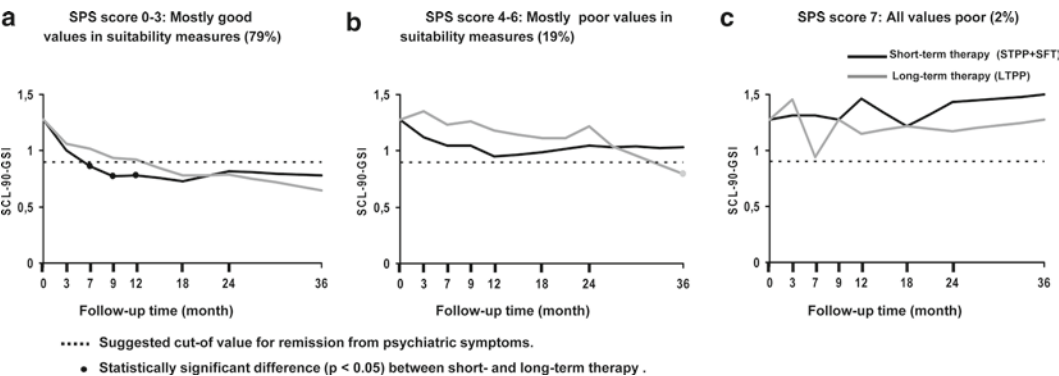335 an aid in the selection of patients for short- and long-term therapy.

Fig. 4.4 Changes in psychiatric symptoms (SCL-90-GSI) according to the SPS score. (**a**) SPS score 0–3: mostly good values in suitability measures (79%). (**b**) SPS score 4–6: mostly poor values in suitability measures (19%). (**c**) SPS score 7: all values poor (2%)
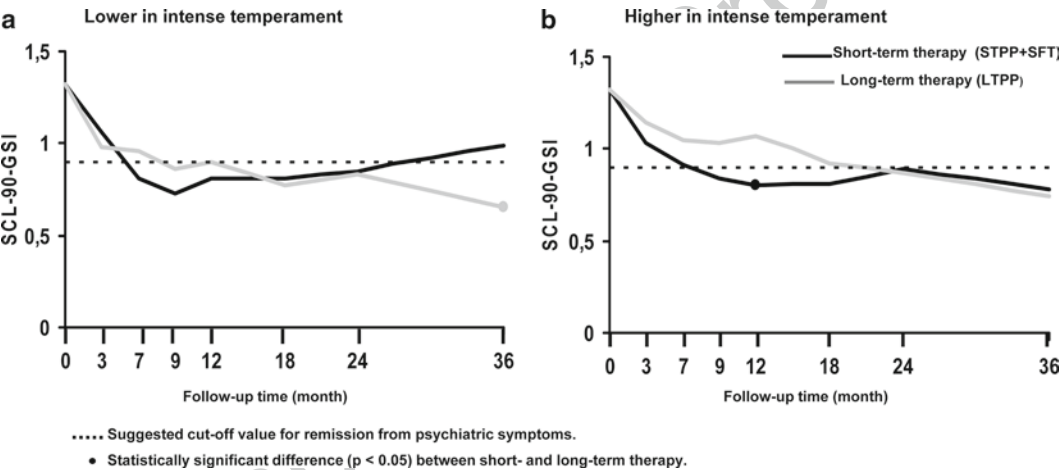

Fig. 4.5 Changes in psychiatric symptoms (SCL-90-GSI) according to the therapist's temperament. (**a**) Lower in intense temperament. (**b**) Higher in intense temperament

Therapist's Professional and Personal Characteristics

Therapist characteristics were assessed, prior to the start of treatments, with the 392-item self-administered Development of Psychotherapists Common Core Questionnaire (DPCCQ) [59, 78]. The questionnaire covers professional and personal characteristics of the therapist. The HPS therapists were found to have similar qualities to the therapists in the large international sample [78, 79], showing professional skillfulness and efficacy, constructive coping, affirmativeness with patients, investment and flow in therapy work, and personal qualities of regarding themselves as highly or moderately genial and forceful, and not at all, or only moderately reclusive. Three groups of these therapist characteristics predicted development of symptoms in a similar fashion and seemed to form conceptually meaningful clusters of therapist qualities. First, therapist characteristics indicating a strong, active, and efficacious commitment to involving patients in the therapy process, as well

347 as an interpersonally engaged and extroverted personality, predicted faster symptom decrease in
348 short-term therapy than in long-term therapy. Second, patients of therapists with more considerate
349 and less intrusive qualities experienced significantly less symptoms in long-term therapy than in
350 short-term therapy at the 3-year follow-up (Fig. 4.5). Third, therapists' lower confidence and enjoy-
351 ment in their therapeutic work predicted poorer outcomes in short-term therapy than in long-term at
352 the 3-year follow-up. Several professional and personal characteristics which predicted similar out-
353 comes thus seemed to share commonalities (e.g., an invested, affirmative professional manner mir-
354 rored by an intense, nonreclusive manner in personal life). This supported the suggestion that the
355 professional skills of effective therapists may in fact be intertwined with their personal qualities.

Discussion

356

Background

357

358 The evidence on the relative effectiveness of psychodynamic psychotherapies of different lengths in
359 the treatment of mood and anxiety disorder, the most common problems of psychotherapy patients,
360 is relatively scarce [8]. The HPS is the first study to compare three different psychodynamic psycho-
361 therapies – short-term psychodynamic psychotherapy, long-term psychodynamic psychotherapy,
362 and psychoanalysis. Definite advantages of this study are the fact that it includes a comprehensive
363 set of outcome measures, repeated several times during a long follow-up, and allows generalization
364 of the findings since the study population was relatively large and the therapies were performed as
365 in normal clinical practice. As evaluation of adherence and therapy process were based on relatively
366 few measures, without recording therapy sessions, the relative effect of therapy length and specifics
367 of the therapy process on outcomes cannot, however, be defined in detail. It is evident that the crite-
368 ria for evidence-based therapy [80, 81] cannot be satisfied in studies including long-term therapies
369 or long follow-up times. In fact, such an approach neglects the majority of all valuable data col-
370 lected. For this reason, we chose an epidemiological approach [82] and based our conclusions on the
371 more versatile Hill's criteria. We also used advanced statistical methods to approximate efficacy.

Summary of Findings

372

373 In the present study, patients suffering from mood or anxiety disorders and receiving short-term
374 therapy, either psychodynamic or ~~solution focused~~, recovered faster from both symptoms and work
375 disability, but in the long run, long-term psychodynamic psychotherapy gave greater benefits.
376 Furthermore, at the end of the 5-year follow-up, the symptom level in the psychoanalysis group was
377 lower than in the long-term psychotherapy group. These findings thus indicate that the length of
378 therapy is important when predicting the outcome of the therapy. Both the effectiveness and cost
379 effectiveness of the two short-term therapies were similar, thus further strengthening the finding that
380 different therapies of the same length produce equal benefits, and also, at least in the short run, lead
381 to relatively equal direct and indirect costs.
382 The four therapies considered were not sufficient for all patients. About 50% of the depressive
383 patients and 70% of the anxiety patients recovered during a 5-year follow-up. During that time
384 period, over half of the patients used auxiliary treatment, psychotropic medication, psychotherapy,
385 or hospitalization. The patients receiving short-term therapy needed more auxiliary treatment than

those receiving long-term psychotherapy or psychoanalysis. When the auxiliary therapy sessions were added to the study therapy sessions received, the patients in the short-term groups had, on average, received a therapy of moderate length. These findings on specific insufficiencies of different psychotherapies are essential in opening up a new perspective for more clinically relevant outcome research by evaluating effectiveness more comprehensively and during a long-term follow-up. This implies a need for paradigmatic change in effectiveness research towards acknowledging the utility of lengthier follow-up, complemented by prediction studies which provide evidence of therapy-specific determinants of their sufficiency and suitability – and lesser clinical utility of "pure" efficacy studies.

The amount of therapy needed to recover could be predicted by assessing patients' pretreatment suitability based on their personality and interpersonal predispositions before the start of therapy. Patients with better predispositions (i.e., good values in the suitability index, e.g., more reflective ability) seemed to gain sufficiently from short-term therapy, whereas patients with worse predispositions seemed to need long-term therapy or some other treatment to recover. It was also demonstrated that therapists equipped with certain professional and personal characteristics were more effective in short-term therapies and others in long-term therapies.

Practical Considerations

The HPS is based on an exceptionally long follow-up of patients who were randomized to short- or long-term therapies or self-selected for psychoanalysis. Initially, it was not considered practically, nor ethically, possible to randomize patients to all four therapy forms, due to different indications for psychoanalysis. Instead, similar diagnostic inclusion criteria were applied in all therapy groups and a multitude of patient and therapist characteristics were measured at baseline to ensure applicability of a high-quality quasi-experimental design in which PA was compared with the randomized therapies and differences in these characteristics were adjusted for in the statistical analyses. The fact that the randomization procedure resulted in dropout for 20% of those allocated to LTPP further underlined the possibility of an effect of patients' preferences on treatment choice, and needs to be considered in the interpretation of the results. In order to provide a comprehensive data base, the HPS study protocol was designed to include both quantitative and qualitative data, a serum sample bank, quality-control procedures, development of new methodology, and monitoring of all patients, including dropouts and use of auxiliary treatments, during a 10-year long follow-up period and 15 measurement occasions. An extensive group of researchers representing different disciplines and expertise, clinicians, and organizational resources have been involved in the study.

Future Perspectives and Conclusions

The HPS is an ongoing study with many research aims, and thus the results presented only give a preliminary, fragmentary picture of the effectiveness of psychodynamic psychotherapies in the treatment of individuals suffering from mood or anxiety disorders. Future perspectives are to continue the follow-up to 10 years from start of treatment, to analyze a comprehensive set of outcome measures, to evaluate the mutual importance of different patient and therapist suitability factors and the

424 alliance, to study the possible modifying effect of genetic factors, to determine reasons for auxiliary
425 treatment, and to evaluate and produce new statistical methods for deepening the understanding of
426 findings from quantitative research and for combining findings from quantitative and qualitative
427 approaches.

428   In conclusion, psychodynamic psychotherapies of different length are effective in the light of
429 HPS, although not sufficient for all patients. However, factors affecting sufficiency of and suitability
430 for treatments of different length can apparently be identified. The findings presented here should,
431 however, be replicated in other large-scale randomized trials and cohort studies, and further compre-
432 hensive meta-analyses should be carried out.

433 **Acknowledgement** The Helsinki Psychotherapy Study Group [19] was responsible for the data collection.

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Author Queries

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Queries	Details Required	Author's Response
AU1	Please check and confirm the inserted issue ID and page range for Ref. [6].	
AU2	Please update Refs. [43,44].	