

## **EFFECTS OF MEDITATION AND PSYCHOTHERAPY ON PSYCHOSOMATIC SYMPTOMS, DEPRESSION, AND SUBJECTIVE STRESS—ANTAGONISTIC OR COMPLEMENTARY APPROACHES?**

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**ABSTRACT:** A longitudinal study of app. 2.5 years with 181 patients of a clinical psychology practice combined Transcendental Meditation (TM) and Western-style psychotherapy in the treatment of patients.\* Main results observed with TM were a significant reduction of nervousness/psychosomatic symptoms within the first year of practice and a significant decline of depression and increase of robustness within the first 18 months. The time-shifted combination of the two approaches—TM and psychological methods—were significantly effective in stress reduction. With depression and nervousness/psychosomatic symptoms, the final values of the subjects differed positively from the population mean, indicating that tendency toward the mean could not explain the results. Burnout patients especially profited significantly from TM as a stand-alone intervention; however, they did not improve in sociability and extraversion, but remained socially rather isolated. The disorder-specific treatment effects of the combined time-shifted application of TM and psychotherapy significantly surpassed the effects of monointerventions.

*Keywords search words:* TM, Transcendental Meditation, psychotherapy, nervousness, depression, stress.

\*This research report is based on a serial field study spanning 2.5 years with a sample of 181 patients of a psychotherapeutic practice and a comparison group of 20 patients in two other practices. This article summarizes some of the results reported in Fehr (2003).

## **1. Introduction**

Transcendental Meditation (TM) is the easy and effortless technique of bringing the attention to subtler and more refined levels of thinking. The author was trained personally by the founder of TM, Maharishi Mahesh Yogi. He now teaches TM independent of the TM movement for reasons explained in Fehr (2002a) and succinctly summarized by Piron (2001b): The TM organization is "characterized by ideologies that seem to be questionable in the eyes of the author" (p. 72).

Extensive research on TM in the last 40 years has shown positive effects on health in general (Orme-Johnson, 1987) and on psychological well-being in particular (Eppley, 1989; Fehr, 1996; Grawe, Donati, & Bernauer, 1994). In a field study, Orme-Johnson (1987) compared 5 years of medical insurance utilization statistics of approximately 2,000 regular participants in the TM program with a normative database of approximately 600,000 members of the same insurance carrier. The benefits, deductibles, co-insurance terms, and distribution by gender of the TM group were very similar to the norm; however, the TM group had lower medical utilization rates in all categories. Inpatient days per 1,000, by age category, were 50.2% fewer than the norm for children (0-18 years), 50.1% fewer for young adults (19-39 years), and 69.4% fewer for older adults (40 years and above ). Outpatient visits per 1,000, for the same age categories, were 46.8%, 54.7%, and 73.7% fewer, respectively.

Hospital admissions per 1,000 were fewer for the TM group than for the norm for all of 17 major medical treatment categories, including 30.6% fewer for all mental disorders, and 87.3% fewer for diseases of the nervous system. Hence, one could hypothesize that meditation, along with psychotherapy, might be of some benefit to the patients.

In their survey of the latest research on different meditation techniques, Shapiro, Walsh, and Willoughby (2003) reported the following results for the TM technique: increased practical intelligence, field independence, creativity, and speed of information processing (So & Orme-Johnson, 2001); a significant increase in positive personality growth as a function of the length of practice of TM (Sridevi, Rao, & Krsiha, 1998); and deep physiological relaxation (Dillbeck & Orme-Johnson, 1987).

Contributing to a lively speculative discussion concerning the topic of epilepsy and TM (Orme-Johnson, 2006), this researcher reviewed the reports in his therapy practice spanning 30 years and containing data from more than 1,000 meditating patients. It was found that patients with symptoms of partial epilepsy experienced complete freedom from seizures from the moment they started TM (Fehr, 2006b).

Among the different meditative states experienced during TM, the experience of transcendental pure consciousness, which is conceptually identical with the state of (brief) objectless *samadhi* in the yoga tradition

of Patanjali, is marked by specific physiological changes (Travis, 2001). Mason et al. (1997) looked for identifiable neural correlates of self-reported continuous transcendental consciousness—continuous *samadhi* experience even during sleep (*nirvikalpa samadhi*)—and found unique EEG signatures for long-term TM practitioners. The witnessing experience during deep sleep was accompanied by significantly higher theta-alpha activity (beside their regular delta-EEG, which signifies a sound sleep state) and decreased chin-tone (EMG) compared to short-time TM practitioners or nonmeditators. Shapiro et al. (2003) held that "these findings may be some of the most significant discoveries in the field of consciousness studies" (p. 81).

A study comparing different forms of meditation by using the German form of the MEDEQ survey—the *Meditationstiefefragebogen* (MTF) developed by Piron (2001a, 2001b)—indicated that TM practitioners reached the deepest state of meditation, the nondual state of the transpersonal Self, or *samadhi* (also called transcendental consciousness or pure consciousness without content) within the first days of practice in most cases because of the technique's emphasis on effortlessness and ease of approach (Fehr, 2002a).

Two points should be highlighted concerning the classification of TM within the realm of meditation forms: First, TM is an objectless meditation (*asamprajnata* meditation, according to the Yoga Sutra

terminology), in contrast to the rather concentrative mantra meditation, which belongs to object-related forms (*samprajnata*) of meditation. The difference lies in the meanings associated with the term *concentration*: Generally, mantra meditation uses mantra as an object for the mind to concentrate upon. The TM technique, by contrast, uses mantra to let go of the attention. The second point is that TM sometimes is mistakenly classified as a passive technique. But it is neither passive nor active. Rather, the attention is being trained to maintain a balance between being active and passive. This balanced state of mind is essentially a state of pure consciousness without thoughts.

Of special interest to this researcher was the question how TM (as a method for repeatedly experiencing the state of pure consciousness) and psychotherapy might get along with each other, which prompted this investigation.

## **2. Method**

This mixed methods study used both quantitative and qualitative approaches to find answers to the question how Eastern meditation might be helpful within the context of Western-style psychotherapy. The method used in the quantitative portion of this investigation was the equivalent of a field study rather than of an experimental design. Our office used the scales of the *Freiburger Persönlichkeitsinventar* (FPI and

FPI-R) to determine the effects of psychotherapy and/or meditation (i.e., TM) through pre-post comparisons. Patients were asked to fill out questionnaires at regular intervals, up to 6 times, within a maximum time span of 2.5 years. Table 1 shows traits measured with the FPI and their abbreviations.

Table 1

*Abbreviations of the Freiburger Persönlichkeitsinventar (FPI) Survey*

Abb.	Trait	Abb.	Trait	Abb.	Trait
NER	nervousness	GES	sociability	EXT	extraversion
AGG	aggression	GEL	placidity	NEU	neuroticism
DEP	depression	DOM	domineering tendency	MAS	robustness
ERR	irritability	GEH	Inhibition	BEA	subjective stress

Two therapists working within their regular therapy schedules (without the use of TM) handed out questionnaires to their patients in parallel to our study, whereby a Reference Group was established. The interval for the Reference Group was app. 11 months; the longer time frames could not be used because the number of subjects was too small.

### **3. Time Series Profiles and Pre-Post Changes for Selected Scales**

To provide a detailed description of the most prominent changes, the scales for which significant changes could be observed were selected.

The different groups under consideration were:

*Group 1* ( $n = 16/12/16$ ) receiving psychotherapy only.

*Group 2* ( $n = 16$ ) started with psychotherapy and, after a mean interval of about 6 months, meditation was added.

*Group 3* ( $n = 24$ ) started with psychotherapy and meditation simultaneously.

*Group 4* ( $n = 8$ ) practiced meditation only without psychotherapy.

*Group 5* ( $n = 19$ ) consisted of long-term meditators with an average of 3 years of practice.

The short-term interval averaged 4-6 months; the long-term interval averaged 10-13 months.

#### **3.1 Nervousness/Psychosomatic Symptoms**

On the FPI Nervousness scale, this condition is characterized by "physical complaints and vegetative symptoms; general psychosomatic disorders; strong physical response to emotional irritation." The scale covers typical somatoform symptoms.

The values of Nervousness/Psychosomatic Symptoms of Group 1 (psychotherapy-only patients) were considerably lower compared with those of the Reference Group both at the start and at the end of the period of measurement ( $p = .062$ ). This might be the reason why these patients opted not to take up meditation.

The level of Nervousness in Group 2 (prospective meditators) was considerably higher, when it was recommended that they practice meditation to support their therapy. This brought about a selection based on therapeutic deliberation. Psychosomatic Symptoms played a major role for those patients at the beginning of their therapy, and there was no change within the first few months of psychotherapy. Their initial scores were similar to those of the Reference Group, which were initially high as well. If one compares the changes of the meditating patients during the first 10-12 months of practice with those of the Reference Group during the same period, the 16 meditating patients exhibited a significantly greater reduction of Psychosomatic Symptoms ( $\bar{d} = -0.83$ ) than the Reference Group ( $\bar{d} = -0.22$ ;  $p = .036$ ;  $ES\ d = .64$ ).

Group 3 (meditation and therapy simultaneously) exhibited significantly lower values in FPI Nervousness ( $\bar{d} = 0.03$ ), compared to the Reference Group ( $\bar{d} = 0.60$ ;  $p = .024$ ;  $ES\ d = .63$ ), app. 1 year later and ended on a positive level below the population mean.



Group 4 (meditation-only) showed highly significantly reduced values in Nervousness ( $\emptyset = -0.60$ ) app. 1 year after starting TM, compared to the Reference Group ( $\emptyset = +0.60$ ;  $p = .006$ , nonparametric;  $ES d \sim 1.17$ ).

Group 5 (long-term meditators) underwent psychological methods such as holotropic breath work, Gestalt therapy, bioenergetic and other body work, as well as various methods with a group-dynamics orientation. Right from the beginning, they showed significantly lower Nervousness values compared to the norm, and they achieved highly significant lower values compared to the Reference Group at the end of the latter's 1-year interval. The values for long-term meditators decreased even more in the following 14 months, moving further away from the population mean in a psychologically positive direction.

The pretest values for long-term meditators was app.  $z = -.45$  lower compared with the posttest values of 1st-year TM practitioners (Group 2). This represents a comparison of long-term meditators (3+ years) with TM practitioners of app. 1 year's duration. Although this involves two distinct groups of TM practitioners, the development of Nervousness/Psychosomatic Stability observed in long-term practitioners of TM seems to be a trend set by 1st-year practitioners (Group 2) that is carried forward, as can be seen by comparing the respective lines in Figure 1.

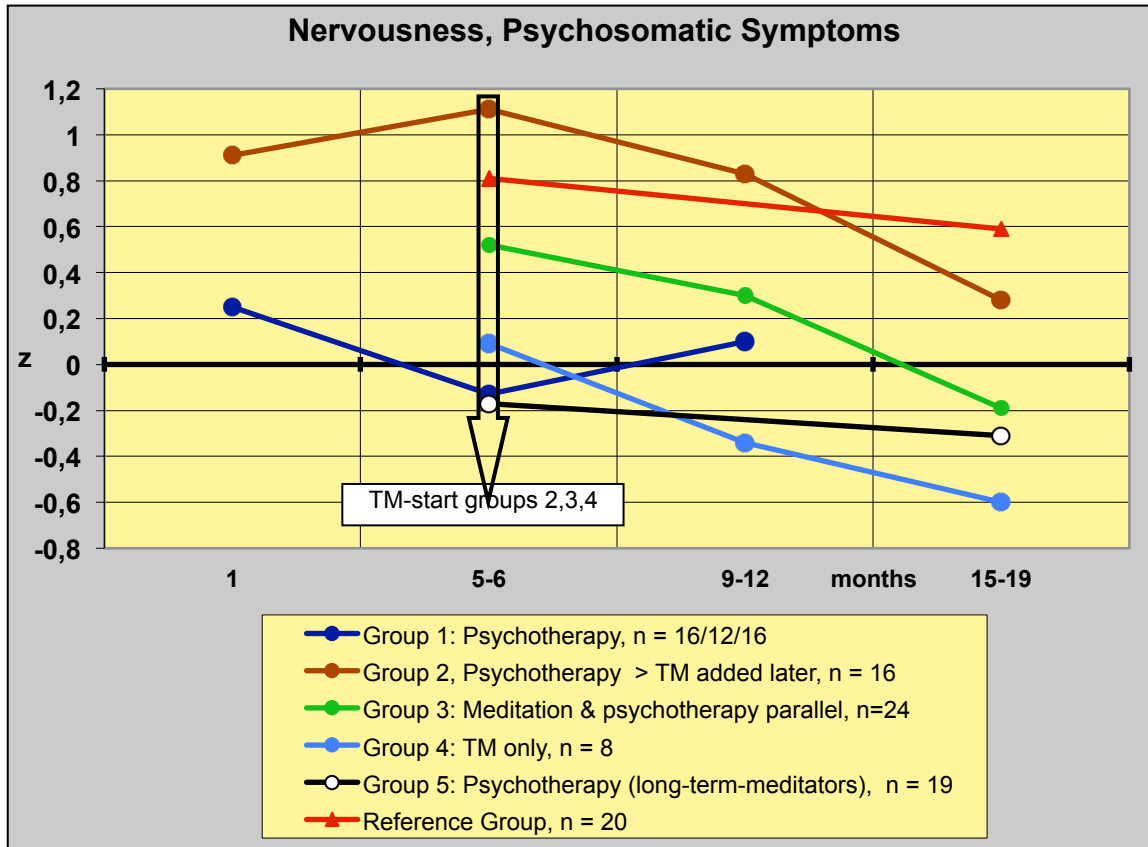


Figure 1. Standardized values (z-values) of different groups of patients at different times (approximate intervals in months).

Using the FPI scale Nervousness/Psychosomatic Symptoms, intervals of the scale are as follows: Psychotherapy: 1 = start, 5-6 = short-term interval of app. 5-6 months, 9-12 = long-term interval of app. 9-12 months; Meditation: 5-6 = start, 9-12 = short-term interval of app. 4-6 months, 15-19 = long-term interval of 10-14 months; Long-Term Meditators (meditation practice  $\bar{O}$  = 35.16 months,  $SD$  = 44.33, min. 3,

max. 168 months): 5-6 to 15-19 = *long-term interval psychotherapy app.*  
*14 months*; Reference Group: long-term interval 11 months.

Considering the values of the two TM Groups 3 ( $n = 24$ ) and 4 ( $n = 8$ ) after 1 year of meditation in comparison with the pretest values of Group 5 ( $n = 19$ ), it appeared that TM steadily carried forward the trend of maintaining Psychosomatic Stability on a level below the population mean. This could be considered an important result.

Due to the fact that the changes of Group 4 ( $n = 8$ ) as well as of Group 5 of long-term meditators ( $n = 19$ ) and Group 3 ( $n = 24$ ) were not only ranging below, but were increasingly moving away from the average of the norm with longer-term practice of TM, regression to the mean cannot be considered as an explanation in this case.

For a total of 40 patients, retests could be provided after an interval of 8-12 months. The effect size (*ES*) of the reduction using paired *t*-tests was  $d = 1.33$ , compared with .49 for the Reference Group. The TM practitioners showed a significantly greater reduction of Psychosomatic Symptoms ( $\emptyset = -0.66$ ;  $n = 40$ ) when compared with the Reference Group (*t*-test for independent samples:  $\emptyset = -0.22$ ;  $n = 20$ ;  $p = .051$ ; *ES*  $d = .44$ ) (Figure 2).

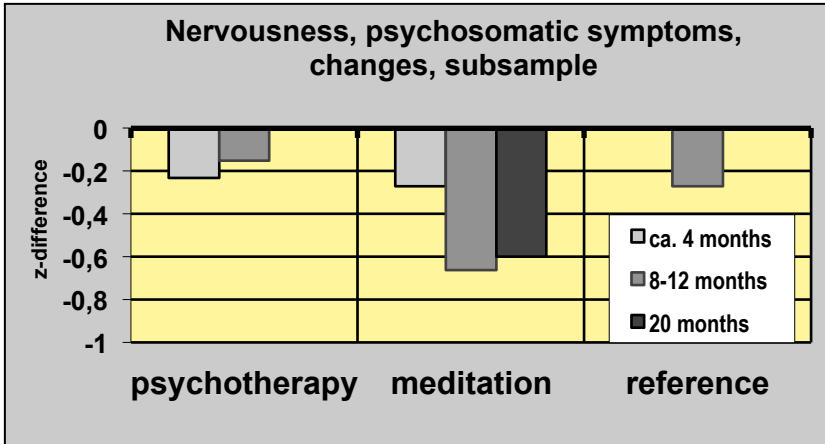
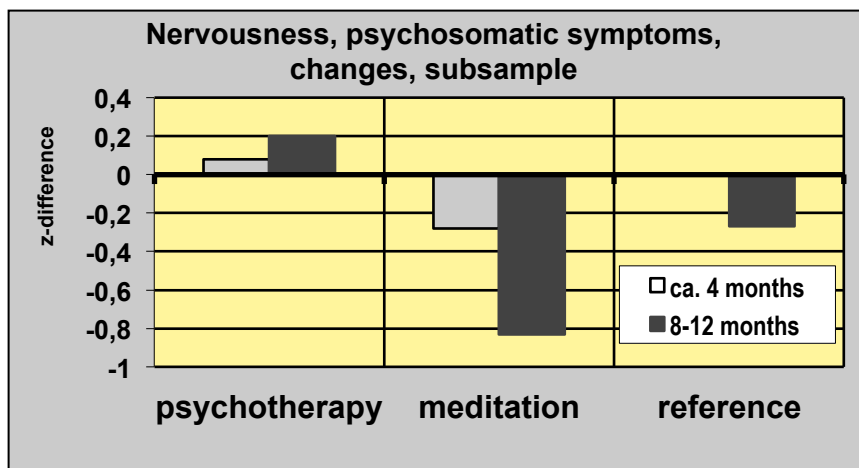


Figure 2. Nervousness changes: Psychotherapy: short-term ( $n = 44$ ; app. 4 months), long-term ( $n = 16$ ; 8-12 months). Meditation: short-term, ( $n = 55$ ; 4-5 months); long-term-1 ( $n = 40$ ; app. 12 months); long-term-2 ( $n = 13$ ; app. 20 months). Reference Group ( $n = 20$ ; app. 11 months).

Figure 3 displays the changes between pretest and Posttests 1 and 2 (Posttest 1 = short-term, app. 4 months; Posttest 2 = long-term, 8-12 months) for Group 2 (prospective meditators;  $n = 16$ ). The long-term effect of TM on the reduction of Nervousness was significantly greater ( $\emptyset = -0.83$ ) when compared with the long-term reduction of Nervousness in the Reference Group ( $\emptyset = -0.22$ ;  $p = .036$ ;  $ES d = .64$ ).



*Figure 3.* Group 2: Mean changes on the FPI scale for Nervousness for psychotherapy and TM ( $n = 16$ ), with meditation starting 6 months after the begin of psychotherapy; retest interval-1 app. 4 months; retest interval -2 at 8-12 months. Reference Group long-term value: 11-month interval.

Psychosomatic stability was steadily increasing with meditation practice throughout the first year. For app. 10 months, the values remained generally stable; they seemed to improve further in subsequent years. This would indicate that, in the long run, TM contributed effectively to reducing Psychosomatic Symptoms, and it was more effective than psychotherapy alone. In this study, the long-term effects of TM were more pronounced than the therapeutic effects or the corresponding changes in the Reference Group on the FPI scales Nervousness, Depression, Neuroticism, and Robustness.

### **3.2 Depression**

On the FPI scale, Depression is characterized as "ill-humored and depressed; anxiety; loneliness; deficiency in concentration; full of worries; feelings of inferiority."

Except for the meditation-only Group 4 ( $n = 8$ ), which did not receive therapy, yet exhibited a rather swift decline of Depression right from the beginning of their meditation practice, the decrease of Depression in patients who simultaneously underwent psychotherapy and TM was considerably slower. After app. 1 year, they reached the

same level (population mean) that had been attained by the 8 subjects of Group 4—TM as monointervention—in app. 4-6 months. Depression scores of Group 4 at the 1-year mark, by comparison, were found to be slightly below the population mean (Figure 4).

A comparison of pre-post evaluations indicated that the positive effects of psychotherapy on Depression surpassed those of TM after the initial 4-month interval. They were more or less even at the 1-year mark. However, after app. 20 months, the TM effect was double in size (Figure 5).

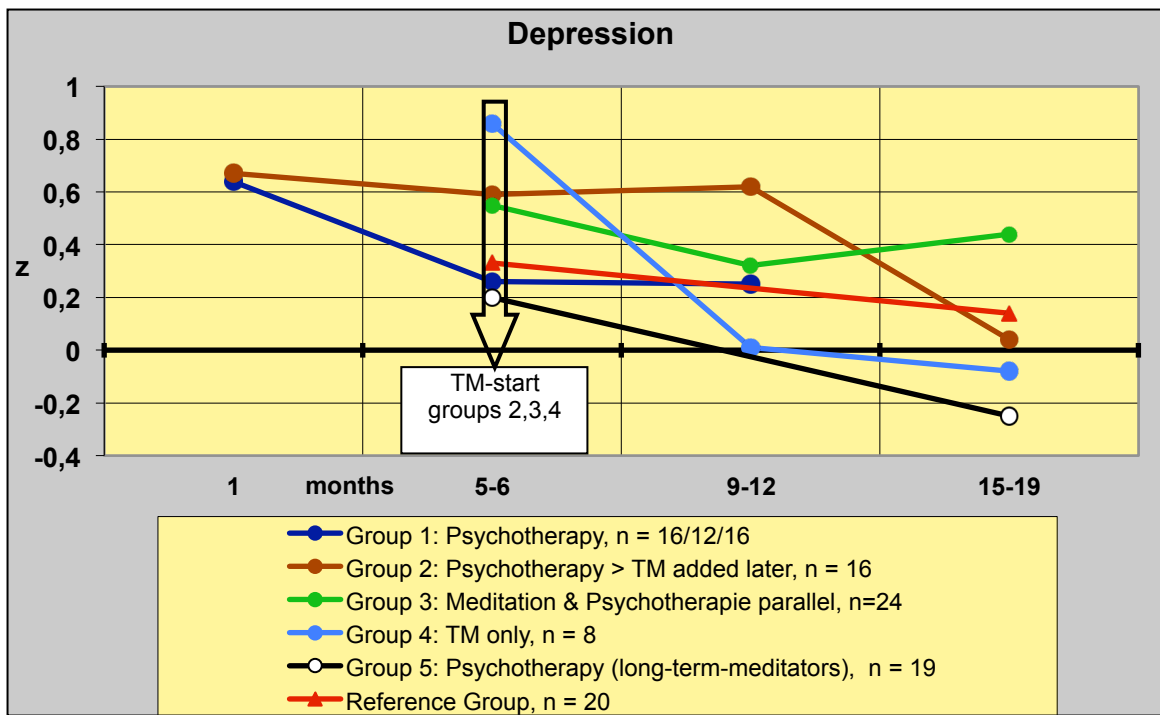


Figure 4. Z-values of different subsamples at different times on the FPI scale for Depression. Psychotherapy: P0 = start, P4 = short-term-interval (1) at app. 4 months, P6 = short-term-interval (2) at app. 6 months. Meditation: M0 = start; M4 = short-term interval of app. 4 months, M10-12 = long-term interval of 10-12 months. Long-Term Meditators: (meditation practice  $\bar{O} = 35.16$  months, SD = 44.33, Min. 3, Max. 168

months). LM0 to LM14 = long-term interval psychotherapy 14 months. Reference Group: Long-term interval 11 months.

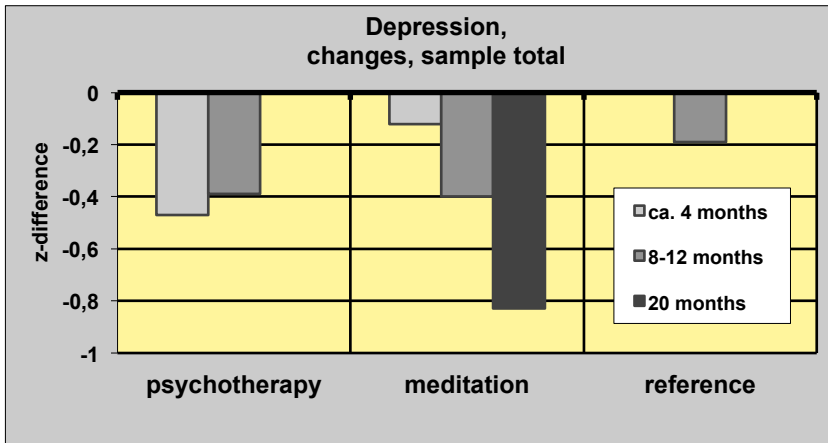


Figure 5. Depression changes. Psychotherapy: short-term (4 months;  $n = 44$ ), long-term (12 months;  $n = 16$ ). Meditation: (short-term: 5 months;  $n = 55$ ); long-term-1 (12 months;  $n = 40$ ) and long term-2 (20 months;  $n = 13$ ). Reference Group (11-month interval;  $n = 20$ ).

### 3.3 Stress

On the FPI scale, Subjective Stress (*FPI Beanspruchung*) is characterized by "physical and psychological stress and demands; strong demands and time pressure; heavy workload; severe strain, which can lead to overexertion, nervousness, and exhaustion."

The longitudinal study indicated that similar stress-reducing effects were achieved with psychological methods and with TM. Whereas the Reference Group did not exhibit any changes in Subjective Stress level, the subjects under therapy or under meditation—who started with slightly increased pretest values compared to the Reference Group and the norm—exhibited distinct positive effects on the FPI scale for Stress.

This was the case for all combinations of interventions. The most effective combination appeared to be the one by which the subjects started with meditation (TM) and added behavioral (psychological) methods a few months later ( $\bar{d} = -0.58$ ;  $n = 11$ ;  $p = .003$ ;  $ES d = 1.12$ ) compared with a simultaneous start ( $\bar{d} = -0.46$ ;  $n = 12$ ) or with either intervention being carried out as a stand-alone method (psychotherapy, short-term:  $\bar{d} = -0.35$ ;  $n = 16$ ; meditation, short-term:  $\bar{d} = -0.19$ ;  $n = 11$ ).

The initial scores of the different groups did not differ substantially; they indicated similar starting conditions with respect to the subjects' level of Stress. The reduction of Stress level in all long-term cases exceeded the population mean, reaching values that differed positively from the norm and which can, therefore, not be explained by tendency toward the mean. The specific structure of the combination of psychological methods and TM used in our office seemed to be particularly effective in reducing Subjective Stress (Figures 6 and 7).



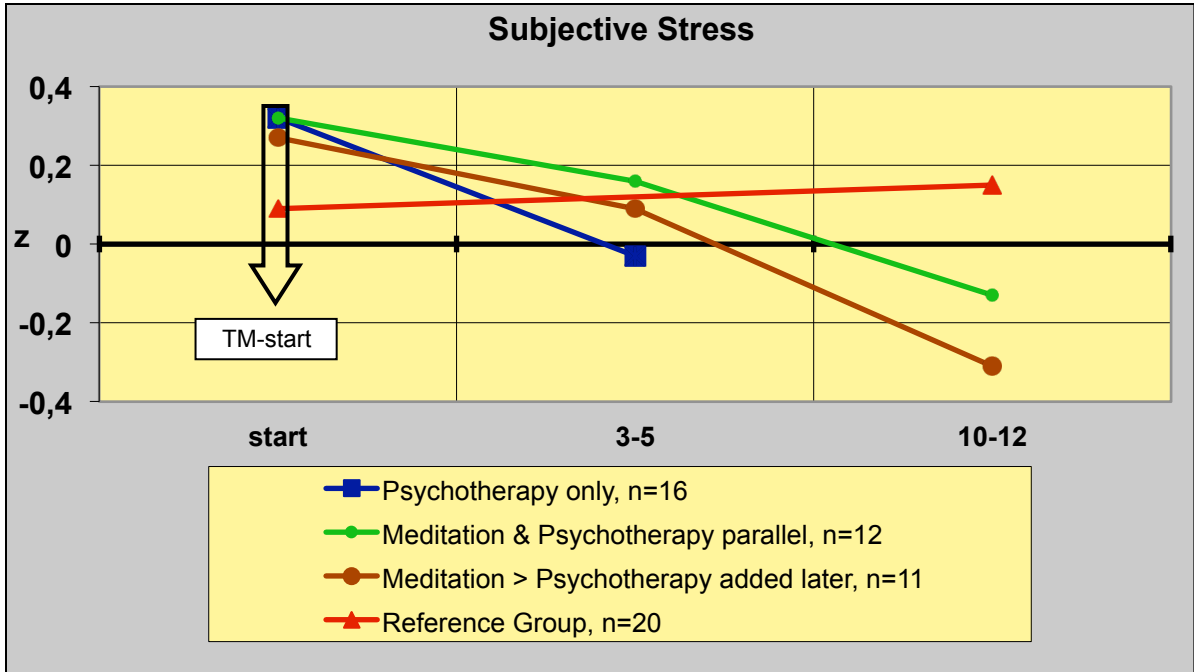


Figure 6. Standardized values (z-values) of different groups of patients at different times, using FPI scale Subjective Stress (Beanspruchung); *Psychotherapy*: P0 – start; P4 – short-term interval app. 4 months; P12 – long-term interval app.12 months; *Meditation*: M0 – start; M4 – short-term interval 4 months; M12 – long-term interval 12 months; long-term interval 12 months; M20 – catamnesis 20 months; *Reference Group*: Long-term interval 11.3 months.

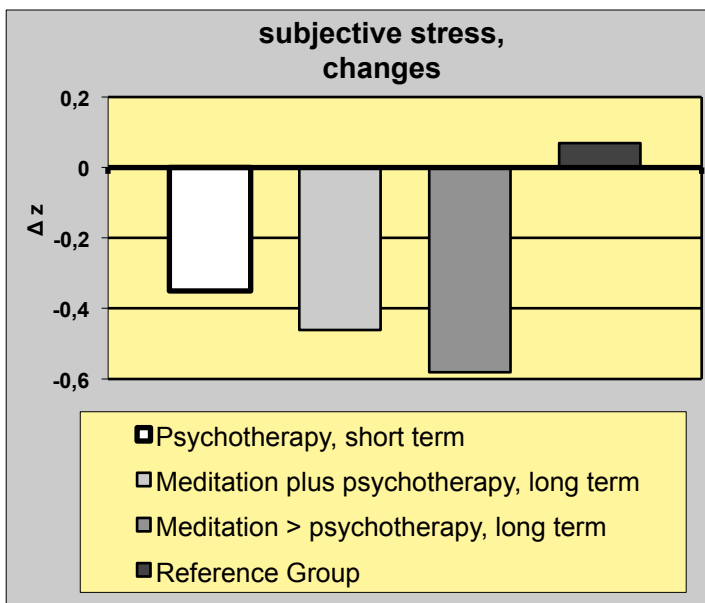


Figure 7. Subjective Stress changes: Psychotherapy: short-term (4 months; n = 16). TM plus Psychotherapy: long-term (13 months; n = 12). TM followed by psychotherapy at

least 4 months later: long-term (12 months;  $n = 11$ ). Reference Group: long-term (11.3 months;  $n = 20$ ).

### *Coping With Stress*

Bamberg and Busch (1996) published a meta-analysis of training methods in stress management in the realm of industrial psychology in Germany, using data from 27 evaluation studies. The training methods included Meichenbaum's stress immunization training (SIT), multicomponent stress training, relaxation training, and stress management workshops. The mean effect size of these training sessions was app. 0.41, compared to .86 and 1.12 with our approaches, which were nearly double in effect size.

### **3.4 Change Patterns and Selection Characteristics**

This chapter first presents a general overview (Figures 8, 9) and, then, goes into more detailed explanations and interpretations of the pre-post values with a 1-year interval between measurements for the different groups. Overall, the comparison of our patients with the Reference Group showed a difference for the FPI value Openness and to a lesser degree for the FPI scales Aggression, Excitation, and Placidity. The FPI scales for Aggression and Openness correlated with each other above  $r = 0.6$ . The differences in the FPI scales for Irritability and Placidity pointed in the same direction: Our patients exhibited higher values for FPI Excitability/Impulsiveness and lower values for FPI Placidity, which

means increased unease, concern, and confusion. This might be due to the emphasis we put on the training in coping strategies for situations of social conflict using the methods of exposition and confrontation derived from behavior therapy; it might also be due to the self-selection of patients who were drawn to these types of therapeutic methods. Body therapy enhanced the tendency toward spontaneous, unrestrained emotional reactions as well. This type of therapy also strengthened the tendency to look upon oneself with an increased self-critical view, indicated by increased values for FPI Openness.

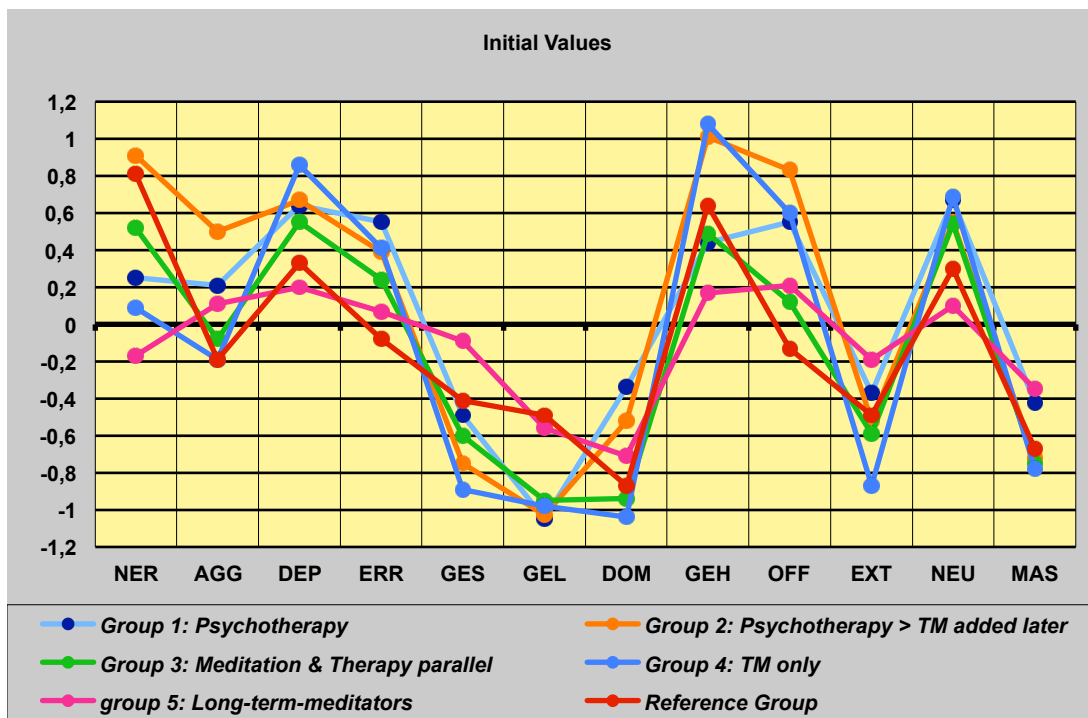


Figure 8. Initial values for all groups.

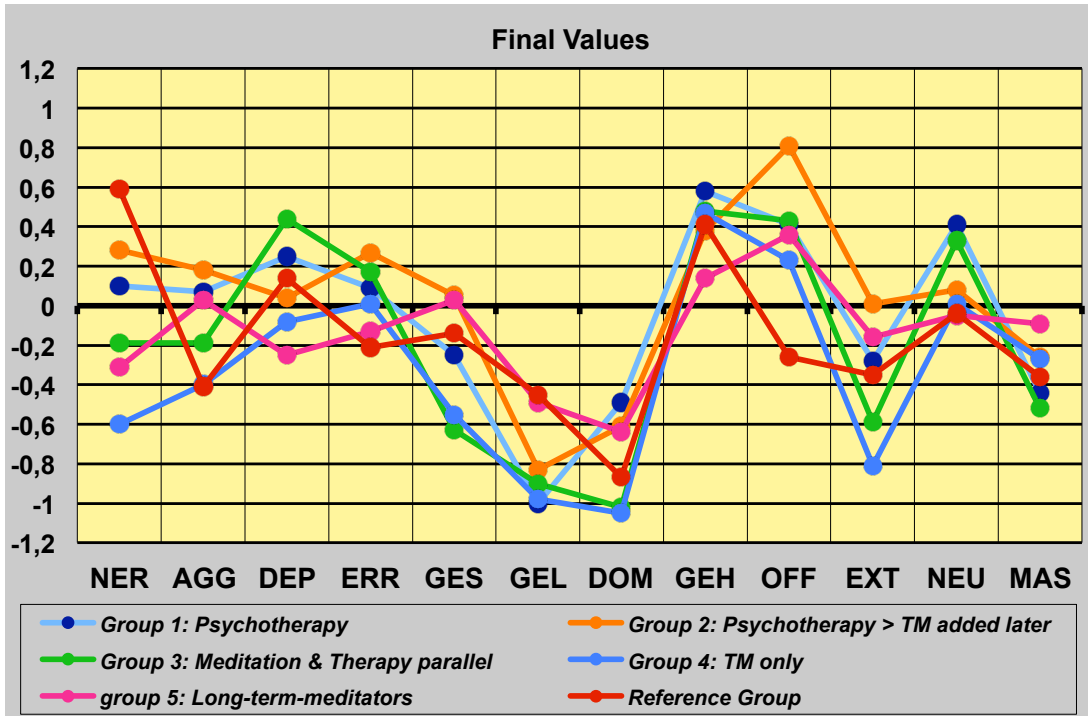


Figure 9. Final values for all groups.

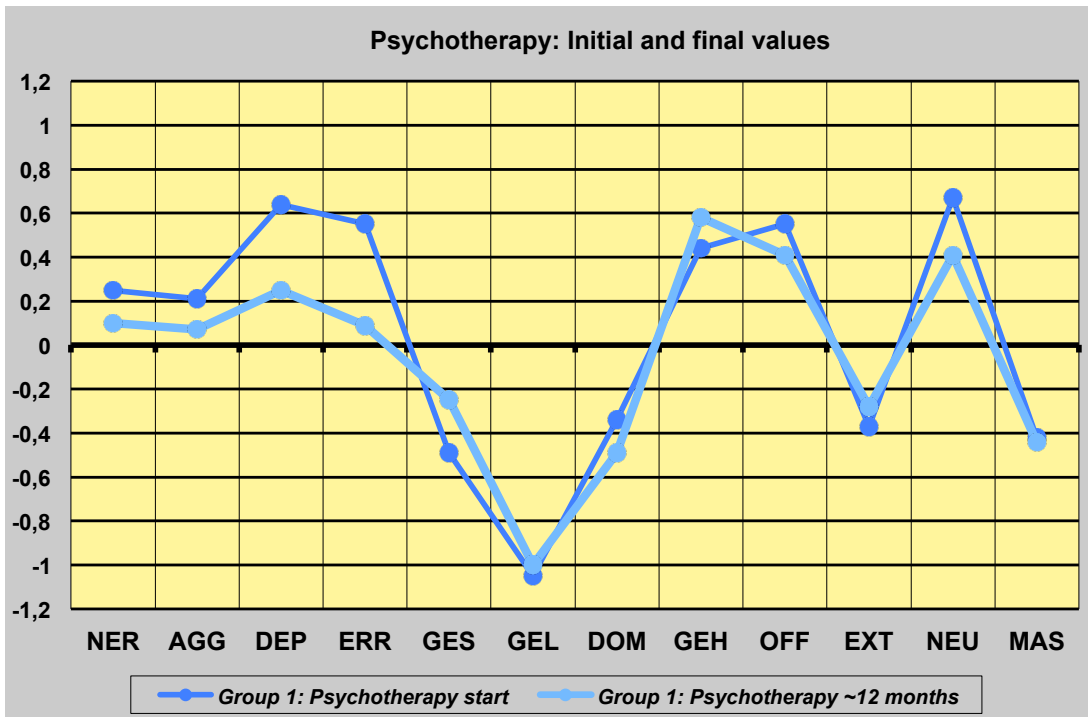


Figure 10. Group 1 (psychotherapy-only) initial and final values.

Psychotherapy yielded its greatest effects (reduction) on the FPI scales for Depression and Irritability and some smaller effects on Sociability (increase) and Neuroticism (decrease) within a 12-month interval (Figure 10).

Group 1 (psychotherapy-only) did not display any differences from the norm with the use of the psychodynamic multidimensional Bioenergetic Personality Analysis (BPA; Fehr, 1998, 2006a) measure with scales for schizoid, oral, psychopathic, masochistic, antagonistic-rigid (phallic and hysteric) personality structure based on Lowen (1979) and the scales of the Big Five personality measure (Costa & McCrae, 1992). During 1 year of psychotherapy, main improvements on the FPI scales for Depression and Irritability and minor improvements on Sociability and Neuroticism could be observed.

The Group 2 (psychotherapy with TM added after 6 months) exhibited some improvement only on the FPI scale for Sociability within the first 6 months (psychotherapy-only prior to TM). However, after starting meditation as an adjunct to therapy, the patients ended at the 1-year mark with greater improvements than Group 1 on the FPI scales for Nervousness/Psychosomatic Symptoms, Aggression, Depression, Sociability, Placidity, Inhibition, Extraversion, Neuroticism, and Robustness. Group 2 subjects, in spite of their significantly greater self-critical attitudes, eventually scored more positive than Group 1 on the

FPI scales for Depression, Sociability, Placidity, Extraversion, and Neuroticism, but they were more nervous.

Concerning personality structure, Group 2 showed significantly reduced values in BPA Conscientiousness (i.e., increased carelessness, negligence, unreliability) and higher values in BPA Antagonism and Rigidity (i.e., low reaction threshold, impatient reactions, strong rivalry tendencies; high competitiveness or show of histrionics, which are both attention-seeking behaviors) as their main behavior patterns. They also exhibited higher values on the hysterical scale of the BPA (i.e., "dramatic and exaggerated emotional expressions"), formerly termed *hysterical*. These symptoms best matched the cluster of Neurotic Disorders. The patients showed aggravation of Somatoform Symptoms during the first 6 months of therapy, which was considered a by-product of our body-oriented psychotherapy (among other methods at that time; Fehr, 2005) and which trained for the expression of suppressed emotions, thereby somewhat boosting excitability and impulsiveness. After starting meditation, the Group 2 values on the psychosomatic FPI scale Nervousness/Psychosomatic Symptoms decreased significantly and approached the population mean (Figure 11).

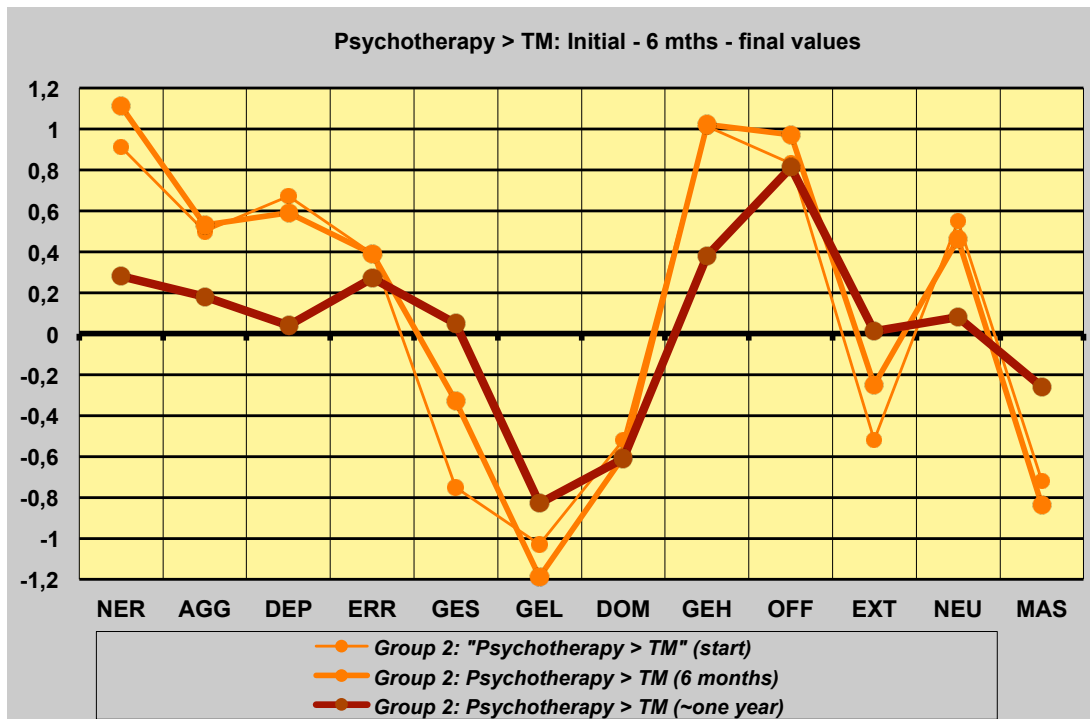


Figure 11. Group 2 (Psychotherapy + TM added after app. 6 months): initial values; values at the 6-month mark, or the start of TM; and final values at the 1-year mark (i.e., 1 year after starting psychotherapy and 6 months after starting TM).

With Group 3 (psychotherapy and TM simultaneously), treatment yielded only a few positive results. The most prominent result after 1 year of treatment with therapy plus meditation was a remarkable decrease of Nervousness/Psychosomatic Symptoms and a small increase on the FPI Openness scale, which means an increased self-critical view about one's own condition, and negligible improvements on FPI Neuroticism and Robustness. The subjects exhibited significantly reduced values on the BPA scale for Dominance, Power (which is the BPA scale's reflection of Lowen's, 1979, psychopathic type) and on BPA Extraversion, which

means increased Powerlessness/Helplessness and Anxious Social Withdrawal (Figure 12).

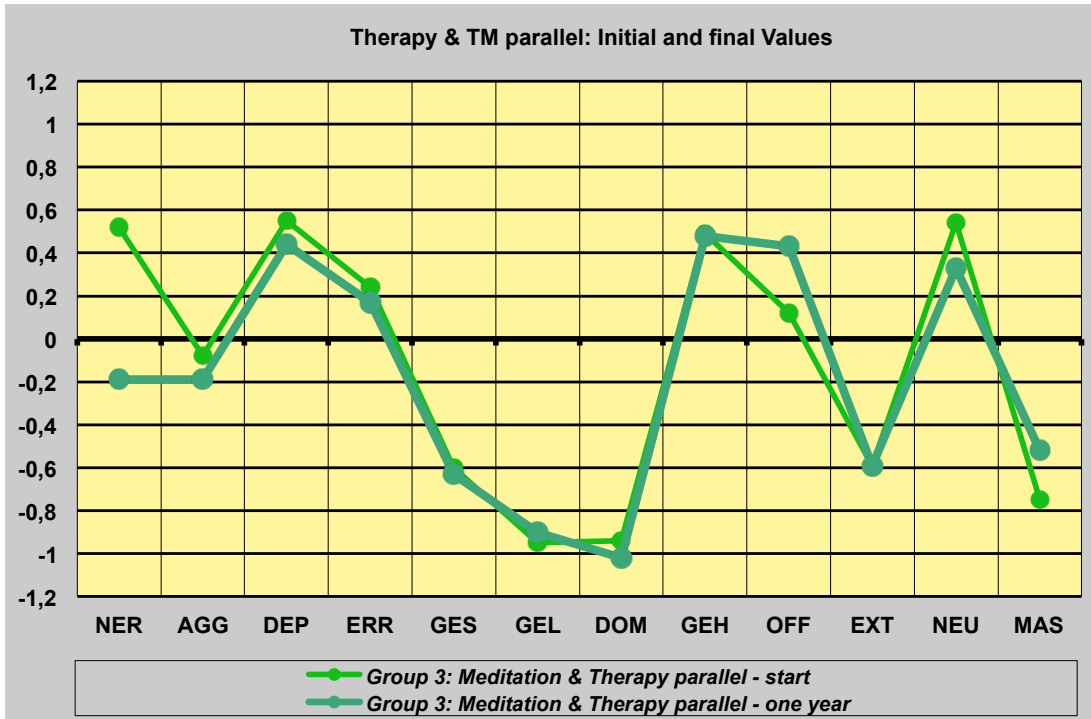


Figure 12. Group 3 (Therapy and TM started simultaneously). Initial and final values.

The main diagnosis for the Group 4 subjects (meditation as stand-alone intervention) was Depression and Exhaustion (burnout) due to excessive demands in positions of high responsibility. Most were highly qualified lone-ranger types. For these patients, meditation as sole intervention yielded remarkable improvements on the FPI scales Nervousness/Psychosomatic Symptoms, Depression, Inhibition, Neuroticism, and Robustness and some improvement on Irritability and Sociability. There were decreased values for Openness, indicating a



reduction in self-critical attitude, but still slightly above the population mean (Figure 13).

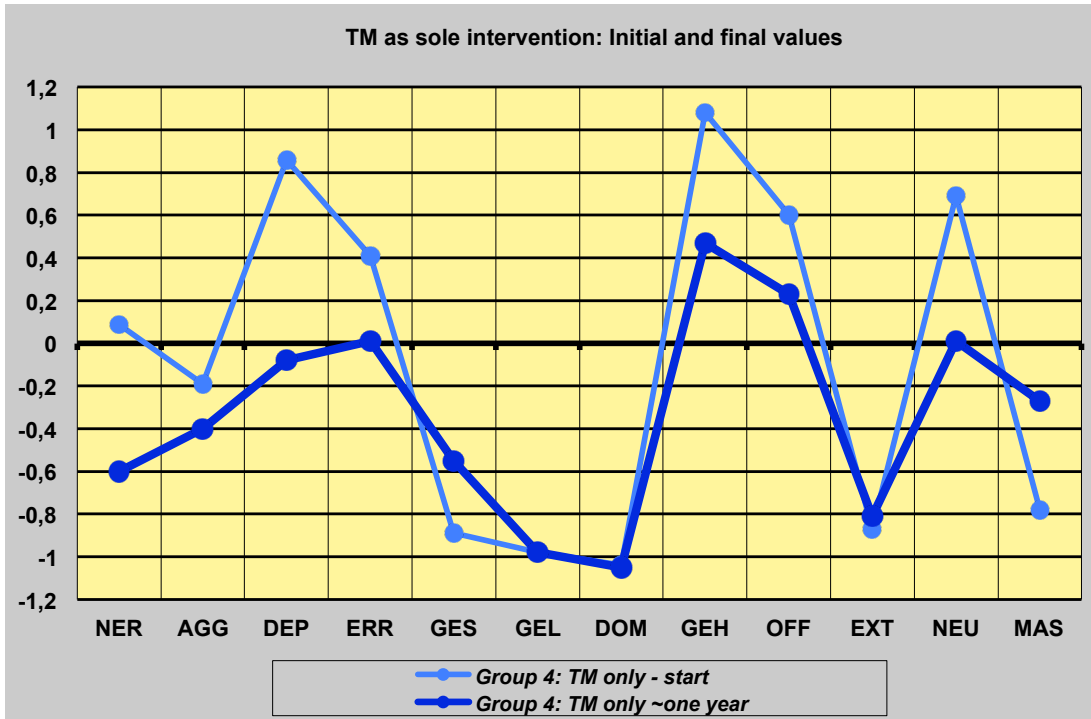


Figure 13. Group 4 (meditation-only) initial and final values.

The meaning of these changes can be summarized as increased Psychosomatic Stability: increased Self-Efficacy, Casualness, Initiative, and Sociability. However, the tendency toward Introversion remained unchanged, and the improvements in Sociability and Inhibition did not reach population means. Acknowledging the improvements brought about by meditation in this group of patients must not be allowed to deceive one about the deficits in Social Competence, which remained unchanged. Meditation as monointervention brought about a small

increase on the Sociability scale, but none on the Extraversion scale. These patients refused to join group therapy; they tended to withdraw from social contacts and into themselves. They were quite introverted and reclusive. Subjects of this group exhibited higher values on the BPA scale for Conscientiousness, and they described themselves as significantly socially withdrawn and anxious (BPA Extraversion) and rather emotionally restrained and sober (i.e., reduced values on the BPA Hysterical/Drama scale).

The Group 5 (long-term meditators) started with rather positive values compared to the other groups in the study. The only noteworthy improvement was observed on the Depression scale, with some minor improvements on the Irritability and Robustness scales. These results for long-term meditators confirmed the results of two earlier independent studies (Fehr, 1996; 2002b). The observable differences on the FPI scales for Placidity and Sociability (higher values) and Excitability (slightly lower value) can be understood in terms of selection because the subjects of the earlier studies were simply regular practitioners of meditation participating in a retreat, but they were not psychotherapy patients. The values of the remaining nine scales can, therefore, be considered representative of long-term meditators. Similar decreased FPI values for Tendency to Dominate were observed for TM practitioners, whether they were psychotherapy patients or not, which might indicate that TM

practitioners are significantly more tolerant and compliant compared with the average citizen (Figure 14).

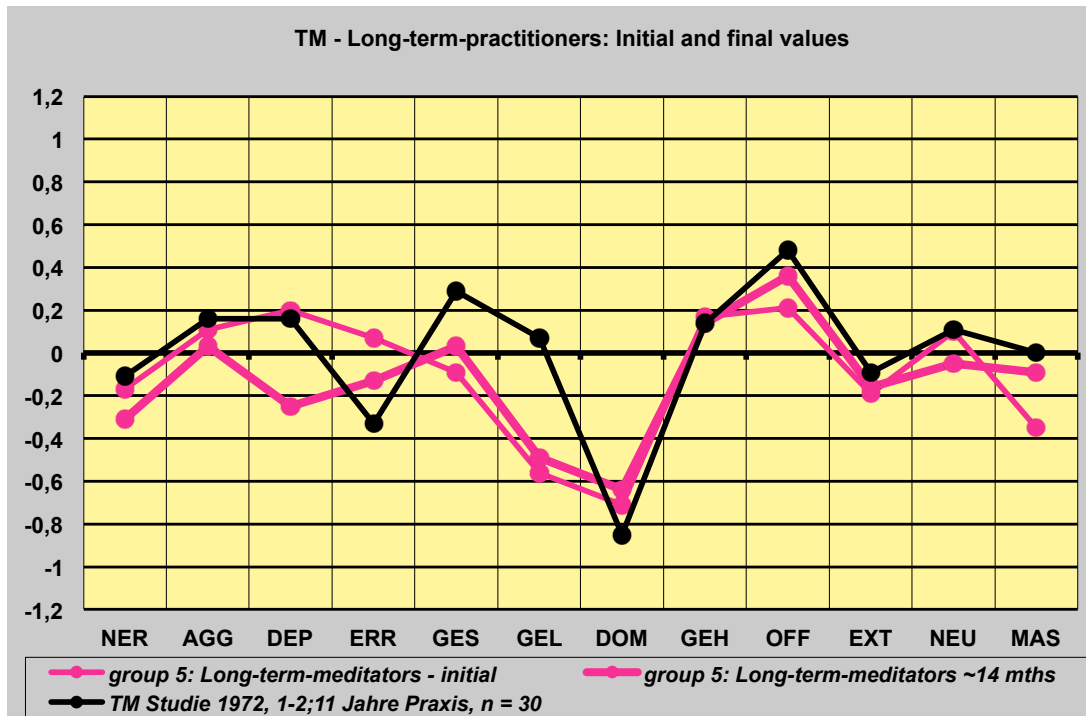


Figure 14. Long-Term TM Practitioners: initial and final values compared to values obtained in a 1972 study of a TM group ( $N = 30$ ) with comparable long-term meditation experience.

Long-term meditators showed significantly higher values on the BPA scales Dominance (Dominance, Power) and Conscientiousness. They were significantly more sociable (BPA scale Extraversion increased) and significantly more emotionally restrained and sober (BPA scale Hysterical/Drama reduced). Changes at the 1-year mark in the values of the Reference Groups were rather small (Figure 15).

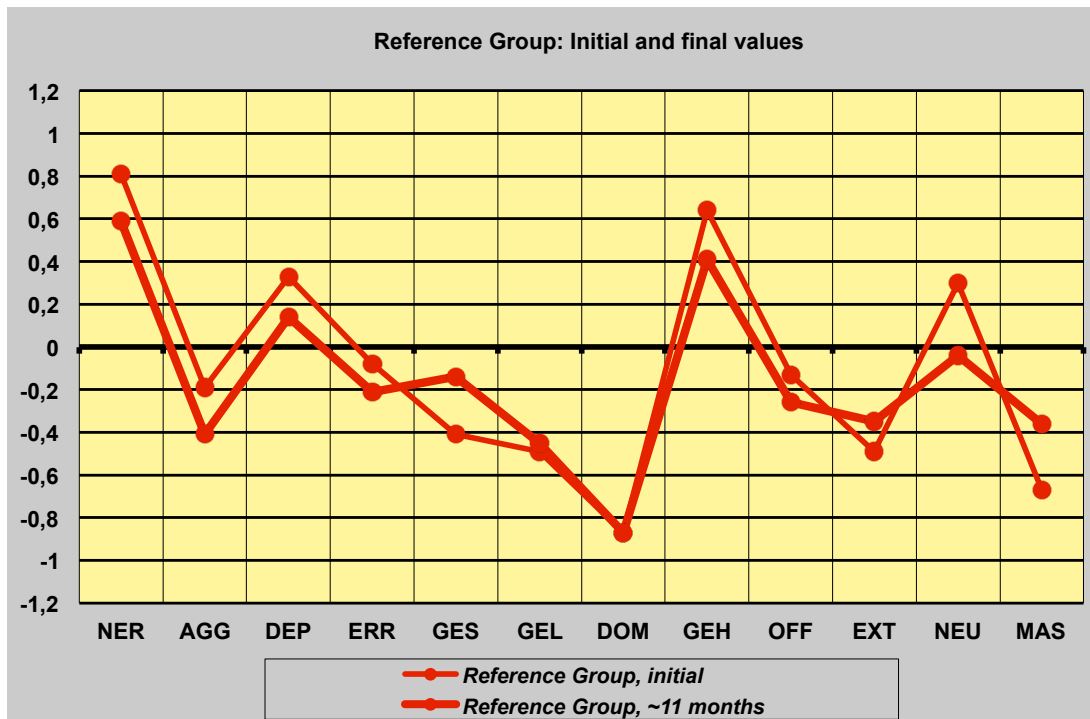


Figure 15. Reference Group: initial and final values.

### *Antagonism of Meditation and Psychotherapy*

The best results concerning improvement in Social Activation, Competence, and Extraversion were achieved by starting with psychotherapy and adding meditation approximately 6 months later. The improvements with either therapy or meditation alone on Sociability and Extraversion were less pronounced, and it also must be taken into account that psychotherapy patients showed considerably lower values on both scales right from the beginning.

Another FPI scale pertaining to social competence is the Social Inhibition scale. When compared to psychotherapy-only, meditation appeared to increase improvements either as a stand-alone intervention

or as a time-shifted adjunct after some months of therapy, but not when both methods were started simultaneously.

Compared were also the effects of meditation and bioenergetic exercises (Lowen, 1979), which this researcher used in the context of socially activating psychotherapy (behavioral exposition/confrontation; dynamic group therapy; Fehr, 2005). By applying the change-sensitive AT-SYM (i.e., a questionnaire to mirror the effects of autogenic training), the changes of 56 patients were reviewed over a 4.4-month interval. Meditators exhibited significant improvements on the Exhaustion scale, in contrast to patients who regularly practiced bioenergetic exercises at home; the latter showed only negligible increases (Figure 16). This result might be a characteristic expression of the antagonism between meditation and psychotherapy, especially the more activating types of the latter, explained Orme-Johnson (1987).

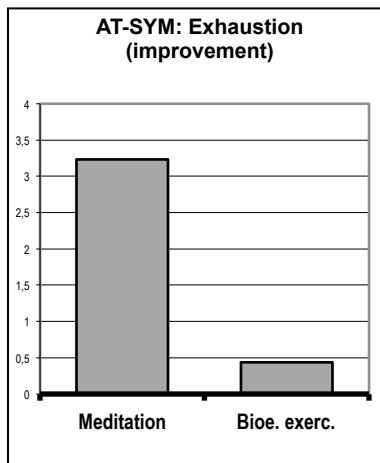


Figure 16. Improvements on the Exhaustion scale through TM versus bioenergetic exercises.

Objectless meditation improves health of mind and body, explained Orme-Johnson (1987), by turning the mind inward and reducing psychophysiological activity until senses, mind, and ego are eventually transcended. Thus, meditation leads to a state of pure consciousness devoid of thoughts, which is a state of perfect stillness. Problem solving and the reduction of symptoms are, thus, achieved through the introduction of a second element, rather than by dealing with the problems directly. The oft-applied metaphor describing this logic is to turn on the light, instead of fighting the darkness.

Therapy, by contrast, is an active approach that aims at improving and supporting self-regulatory processes of the mind (e.g., thinking, emotions, needs), the body, and behavior within one's environment by analyzing and changing them. Therapy often uses visibly activating procedures such as the bioenergetic approach, social and other types of activation, behavioral exposition, and confrontation among others. Even psychological relaxation procedures are based on active approaches such as engaging the senses in subtle types of perception, or visualizations, but generally not with the purpose of going beyond the subtlest levels of mental activity. Clearly, transcending all thought through meditation could be considered a diametrically opposed approach.

Humanistic approaches have paid attention to therapeutic moments of transcendence that happened unexpectedly. Such moments

might have interrupted the therapeutic process and introduced a whole other dimension of experience. Maslow (1968) termed such experiences *peak experiences* and provided a description of their characteristics.

Subsequently, Maslow (1971) posited that there existed a state above self-actualization, namely, self-transcendence. He explained it thus:

[Transcenders] may be said to be much more often aware of the realm of Being, to be living at the level of Being . . . to have unitive consciousness and "plateau experiences" . . . and to have or to have had peak experience (mystic, sacral, ecstatic) with illuminations or insights. Analysis of reality or cognitions which changed their view of the world and of themselves, perhaps occasionally, perhaps as a usual thing.

Therapy deals with the individual's problems as the first element for alleviating life's burdens, whereas meditation, according to Vedic psychology, turns to the *principle of the second element* (i.e., transcendental consciousness, detachment, *samadhi*) as the true basis for effective action. The *Bhagavad Gita* states, "*Yoga stah kuru karmani*" (II, 48), which means: Established in Yoga, perform action (Maharishi, 1967). Yoga denotes a state where the mind has transcended all mental activity and reached the state of pure consciousness, or silence without thoughts.

It is not by chance that to be "established in Yoga" is advised first, followed by *kuru karmani* (perform action). Being established in the Absolute (a synonym for pure consciousness) is seen as the prerequisite to performing action in the relative world. Without being in touch with

transcendental pure consciousness, according to the Vedic view, the individual is bound by his or her actions and overshadowed by the drama of the emotions, unfulfilled needs, and the turmoil created by strokes of fate. These dramas are believed to be the interplay of the three basic tendencies of creation, called *gunas*: *Sattva* (purity), *Rajas* (activity, energy), and *Tamas* (immobility, heaviness, darkness). Vedic psychology also makes very clear how one should deal with the bondage brought about by imbalances of the three *gunas*. The *Bhagavad Gita* instructs, "*Nistraigunyah bhava*" (II, 45), meaning, be without the three *gunas* or "transcend the three *gunas*, O Arjuna. Be free from the pairs of opposites (freed from duality), ever-balanced, unconcerned with getting and keeping and centered in the Self" (Maharishi, 1967). The *Yoga Sutras of Patanjali* offer a similar instruction, "*Yoga□ citta-vrtti-nirodhah*" (Sutra II; meaning, Yoga is transcending the activity of the mind; Aranya, 1977).

The paradigm of Vedic psychology, thus, states: Without meditation as the pathless path inward in order to experience transcendental pure consciousness as the underlying continuity of life, personal identity is not firmly rooted. The psychotherapeutic paradigm, on the other hand, holds that without active engagement of mind and body in the real world and without paying attention to their problems directly, individuals risks losing touch with reality and the soul might be drifting into escapist illusionary realms, instead of effectively thinking



and acting in this world (Fehr, 2002b). These two paradigms are seemingly contradictory, at least in part, and a workable synthesis remains to be found.

Indian psychotherapy is rooted in various teachings of the Veda, which go back some 2 to 5,000 years. One of these teachings is the Yoga System of Patanjali, which is around 2,000 years old (Singh, Ganguli, & Atreya, 1977). Coster (cited in Singh et al., 1977) remarked:

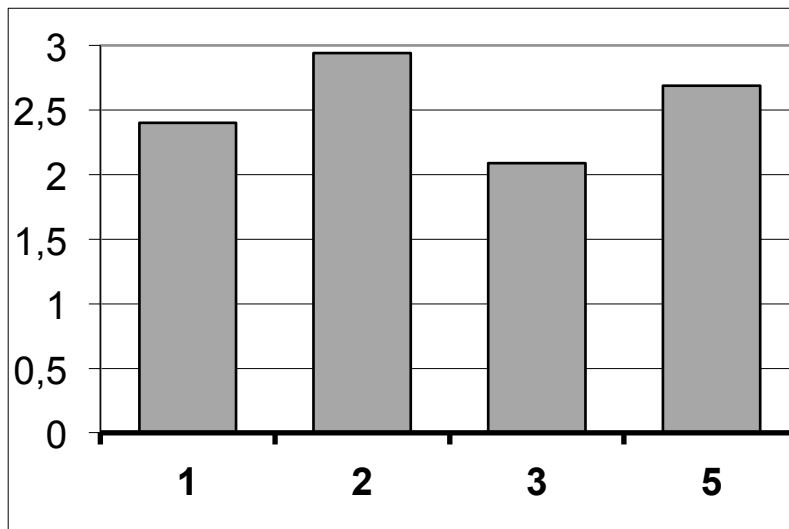
Analytical therapy in the west is a very new and young experiment. Yoga in the east is a very ancient and mature technique. If, however, the whole matter of moral and social discipline, relaxation, breathing and control of thought by meditation were approached by psychotherapists in the non-religious and scientific attitude of the student of Yoga, it might well be that this would lead to the discovery of new and valuable psychotherapeutic methods. My plea is then that Yoga, as followed in the east, is a practical method of mind development quite as practical as analytical therapy and far more practical and closely related to real life than the average university course. Furthermore, I am convinced that the Yoga Sutras of Patanjali do really contain the information that some of the most advanced psychotherapists of the present day are ardently seeking. (slightly reworded; p. 168)

Western and Indian style psychotherapy are clearly operating on the basis of quite different paradigms, which seems to be mirrored by the results obtained in our praxis.

### **3.5 Disorder-Specific Treatment Effects**

Another important aspect is the specific treatment effect pertaining to the diagnosis and the cause for undergoing therapy, respectively. It is part of the therapeutic contract and determines the direction of therapy

and influences the choice or recommendation of methods. As such, the treatment effect is an important criterion for judging the usefulness of the obtained results with respect to the specific complaints with which the therapy has had to deal. Disorder-specific improvements in all patients undergoing therapy were assessed with the use of a 5-point Likert scale (Figure 17).



*Figure 17.* Disorder-specific treatment effects of Groups 1, 2, 3, and 5: Group 1 (psychotherapy-only;  $n = 16$ ); Group 2 therapy + TM added 6 months later;  $n = 16$ ); Group 3 (therapy + TM simultaneously;  $n = 24$ ); Group 5 (long-term practitioners of TM;  $n = 19$ ). Groups 4 was excluded from the study.

The results showed that the least disorder-specific treatment effects were obtained with Groups 3 (therapy and meditation begun simultaneously). Group 4 subjects ( $n = 8$ ) received therapy only to a very limited extent (chiefly, a few consulting talks); therefore, only 4 of the 8 subjects could be rated, and their values were only slightly higher than

those of Group 3. Group-4 values were, therefore, excluded from the study.

In comparison to Group 3, Group 1 (psychotherapy as sole intervention) yielded more disorder-specific treatment effects. Even better were the results for Group 5 (long-term meditators). The best disorder-specific effects were observed with patients in Group 2, who underwent psychotherapy first and added meditation app. 6 months later. In sum, the results of our study showed that the greatest effect was achieved with a combination approach of psychotherapy and time-shifted meditation (i.e., TM).

#### **4. Discussion**

Because this is a field study, the results of this research should be considered preliminary. There could be no randomization of subjects. Concerning this point, the researcher agrees with other authors, notably Orme-Johnson (2008), who wrote that randomized assignments and blind studies are not appropriate procedures for meditation research. The reason for this is that feeling compelled to meditate regularly and over relatively long periods of time without any inner personal conviction and predominantly for scientific purposes might be methodically correct, but would be a questionable approach regarding meditation.

Experimenter bias cannot be ruled out in this study. This researcher was both therapist and meditation teacher of the patients under study. The typically Western role of a therapist and the Eastern-oriented role of a meditation trainer might have been somewhat contradictory or confounding variables because the supervision and attention to the meditation process on the one hand, and providing psychotherapy on the other, follow different rules. Whereas exposition and confrontation are part of Western-style psychotherapy, taking care of the meditation process uses rather smooth and soothing procedures. Thus, the question is justified whether these two roles—therapist and meditation trainer—should be viewed as antagonistic and mutually exclusive or, perhaps, as complementary. If the answer favors antagonism, instruction in meditation and therapy should not be conducted by the same individual. The answer, however, might lean toward complementarity of the two methods. As this study has shown, a certain range of carry-over effects between therapy and meditation exists: Cognitive behavior therapy might be helpful in overcoming difficulties in the meditation process, and meditation seems to enhance the therapeutic process.

Bias might also have been introduced through expectation. However, it is difficult to assess the strength or direction of this bias variable with respect to the different scales. This researcher was

interested in the differential estimation of the effects of therapy and meditation separately and in combination in three areas of symptoms: Somatoform Diseases (psychosomatic symptoms), Depression, and Subjective Stress. Improvements of psychological health through regular meditation had been repeatedly reported (Orme-Johnson, 1973, 1987; Sridevi & Rao, 1998; Walton, Schneider, Salerno, & Nidich, 2005). By combining meditation with therapy, this researcher expected some psychological improvement; however, no specific expectations were put forth as to the pattern of changes, measured with various FPI scales, with either the combined or the separate application of meditation and therapeutic methods.

Similar values of significant reductions of Nervousness/Psychosomatic Symptoms could be observed across all groups of meditation beginners within their first year of meditation practice. However, the three groups under consideration (Groups 2, 3, and 4) started from quite different levels; yet, regardless of starting values—be they 1.5 *SD* above the population mean or near the population mean—significant decreases of symptoms could be observed during the first year of meditation practice. Therapy did not seem to add appreciably to the effect, but neither did it interfere.

Changes in Depression followed a different pattern from those observed with Nervousness/Psychosomatic Symptoms. Meditation alone

produced a rapid reduction of Depression within the first few months. Therapy seemed to interfere, as improvement was delayed when it accompanied meditation. The target area of the meditation-based improvement near the population mean was similar for Group 2 (therapy followed by meditation after app. 6 months), Group 4 (meditation-only), and Group 5 (long-term meditators). This would indicate that TM can be considered as a long-term antidepressant.

While comparing the long-term data of the treatment groups with those of the Reference Group, it should be kept in mind that the longest interval for the Reference Group results was approximately 11 months, in contrast to long-term intervals of 18 months or more with our patients and some meditators. No information is available concerning the progress of the Reference Group beyond 1 year. However, the changes observed within the first year pointed strongly toward greater positive results through meditation.

Self-selection might be responsible for irregular meditation practice or dropping out. In several prior investigations using the FPI (Fehr, 1996, 2003), it was observed that prospective irregular meditators or dropouts were more nervous, less conscientious, more aggressive/unrestrained, open or outright self-critical, more irritable and thin-skinned, hesitant, or depressive on the one hand, and—at the beginning—more sociable, extraverted, and without restraint on the other hand. Individuals thus

described have a greater tendency to react to outer stimuli and a higher degree of field dependence.

When digging deeper into the question what the results of this investigation might suggest about a systematic combination of Eastern meditation and Western psychotherapy, the first impression might be that psychotherapy and meditation represent rather antagonistic and, perhaps, even mutually exclusive approaches, at least when they are started at the same time. The results seem to indicate that the two approaches are hampering each other's effects because they tend to work in opposite directions, that is, activating and deactivating. With a time-shifted start of some 5 to 6 months, however, this is not the case. Whereas Western psychotherapy tends to focus directly upon the problem, Eastern traditional psychotherapy introduces a second element, namely, a different state of consciousness: the silent level of consciousness. On this basis, problems are seen from a different angle, and new perspectives allow new solution: Problems begin to dissolve.

Although Western and Eastern approaches are based on different modes of operation, they seem to act in a complementary fashion under the condition of a time-shifted start. When both approaches are introduced simultaneously, however, the hampering effect seems to dominate because the individual is not, normally, able to follow these two different *modi operandi* at the same time. Perhaps, this is due to learning

effects that involve all psychophysiological levels. A separation by several months, at a minimum, seems to be necessary for establishing activation and deactivation of training effects separately for each modus, in order not to have them interfere with each other.

From the greater disorder-specific treatment effects of a combined therapy-and-meditation approach, it can be concluded that the addition of the yogic way of following a daily routine of experiencing complete silence of mind and body expands the possibilities of personal change and nonidentification with dysfunctional habits of feeling, thinking, and behaving because it adds a new dimension of inner experience of the self.

## **5. Summary**

This longitudinal study showed relevant positive health effects of TM both as an adjunct to psychotherapy and as a stand-alone practice. FPI Nervousness/Psychosomatic Symptoms, which appeared to be resistant to psychotherapy, were reduced quite reliably with TM within 6 to 12 months. This effect continued on a moderate scale during subsequent years and ended on a level that differed in a positive direction from the norm.

Concerning FPI Depression, psychotherapy showed greater effects within the first 4 months. At the 1-year mark, the effects of TM equalled those of psychotherapy, and at the end of 2 years, the TM-effect seemed



to be greater still—in this study, the effect was app. double the size of the 1st-year changes. Moreover, the values for long-term meditators seemed to indicate that positive changes continued on a smaller scale and ended somewhat below the population mean for Depression. Thus, tendency toward the mean cannot explain the effect of improvement in Nervousness, Depression, and Subjective Stress found in the samples of patients in this study.

The effect of meditation on FPI Robustness during the first 4 months was somewhat smaller than the effect of psychotherapy. At the 1-year mark, the effect of psychotherapy had reverted to zero, whereas the changes in the TM practitioners exhibited the same level of change that had been observed within the first 4 months of therapy. Twenty months after starting TM, the effect on Robustness was still considerably more pronounced. This pattern of change resembled that for FPI Depression.

With respect to time sequencing, equally strong stress-reducing effects (FPI Subjective Stress) were achieved with both psychological therapy and meditation. Starting TM and adding behavioral psychological methods a few months later achieved superior stress-reducing effects compared with stand-alone interventions.

From the standpoint of efficiency of psychotherapy or stress-reduction training, the best effect could be seen with a time-shifted

combination of meditation and psychological methods. In this study, the time interval for adding the second treatment method was approximately 6 months. The stress-reducing effects with the use of only one intervention were smaller. Overall, it can be stated that TM could generally be applied with good effect as a nonspecific method for fostering therapeutic success and reducing stress, but psychological methods are indispensable in treating defined symptoms, problems, and ailments.

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