

## RELATIONSHIP BETWEEN THE PATIENT'S ATTITUDE TOWARDS YOGA AND THE TREATMENT OUTCOME.

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### SUMMARY

Correlations were obtained between scores on the P.G.I. Yoga Attitude Scale and improvement in a group of 20 psychoneurotic patients undertaking yoga therapy of 4-6 weeks duration. A significant positive correlation was found between the improvement in social and vocational disability and scores on the P.G.I. Yoga Attitude Scale at intake. However, during treatment and followup, there was a significant change in the attitude towards yoga - it became more positive. Correlations were also performed between improvement and change in attitude over the 5-month study period. Significant positive correlation was seen only on personal distress. Improvement in the other symptoms of neurosis i.e. anxiety, depression, musculo-cutaneous features, vegetative symptoms of neurosis i.e. anxiety, depression, musculo-cutaneous features, vegetative symptoms and the other neurotic features i.e. hysteria, hypochondriasis, obsessions-compulsions and phobia did not show any relationship with the patient's attitude towards yoga.

### Introduction

Establishing the efficacy of any new treatment modality is complex task due to the multiplicity of variables operating not only during the treatment itself but also during the assessment of the outcome. During any treatment which requires prolonged patient-therapist interaction, the placebo effects arising due to the personality, attitudes and expectations of both the patient and the therapist can become important determinants of the treatment outcome. A favourable attitude towards the treatment may give rise to a greater expectancy of cure than an unfavourable attitude. Some researchers took a strong position contending that the patient's expectations for relief may be one of the primary determinants of treatment success (Bednar 1970, Frank et al 1959). Despite this, recent review of the published expectancy research (Wilkins 1973) found little convincing evidence of a significant expectancy-outcome relation. The studies that reported positive findings were significantly flawed

by the subjectivity of outcome measures and other methodological errors (Martin et al 1977).

The field of yoga research has received little attention from this angle. Although various studies have reported a significant improvement in the chronic psychoneurotic patients as a result of yoga therapy (Vahia et al 1966, Naug 1975, Udupa 1975), the relationship of the patient's attitude towards yoga with his response to the treatment remains unexplored. In this study an attempt was made to find out the relationship of the patient's attitude towards yoga and the outcome of yoga therapy in a group of 20 chronic psychoneurotic patients. Keeping in view the fact that change itself is multifaceted and some changes may be less sensitive to the effects of non-specific factors such as attitude and expectations (Richert 1976), a comprehensive evaluation was made of all the aspects of the neurotic illness. Also, in order to ensure a valid picture of the outcome, assessment was made using both subjective and the

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objective measures. The attitude to yoga was measured by the P.G.I. Yoga Attitude Scale (Grover et al 1983; 1987). Assessment was carried out at three different points in time i.e. at intake, at the end of 4-6 weeks of yoga treatment and finally at the end of 3-4 months of follow-up. However during this time, there was a significant change in the attitude towards yoga; it became more positive. Thus, the problem arose in deciding which attitude scores to correlate with improvement. It seemed possible that the attitude at intake influenced the outcome of short duration only, for over time, the attitude itself changed. Thus correlations were performed between the attitude scores at intake and outcome at the end of 4-6 weeks. The second possibility was that as the attitude of the group was becoming more positive, it was giving rise to the improvement in neurosis or at least some of its symptoms. Therefore, correlations were also performed between the degree of change in the yoga attitude and the total change in the psychopathology over the five months study period.

### Material and Methods

#### Sample:

20 neurotic patients were selected from those attending the psychiatry out-patient clinic on the basis of well defined criteria. Included were those subjects who were 18-50 years old, who had the illness for at least 6 months with diagnosis of Anxiety Neurosis, Neurotic Depression, Neurosis N.O.S. and Neurasthenia (as per I.C.D-IX Nos. 300.0, 300.4, 300.9 and 300.5). Excluded were patients with presence of any other major physical disease or with other than the above mentioned neurotic conditions. There were 9 cases of Anxiety Neurosis, 10 of Neurotic Depression, and 1 was Neuroses N.O.S. The mean duration of illness

was 6.11 years. Majority were males (N = 12), married (N = 12) and Hindu (N = 12). The mean age was 31.9 years. Nearly 70 per cent were educated upto intermediate level and 85% belonged to the lower occupational strata i.e. skilled worker/semiskilled worker or were unemployed/housewife/student.

#### Treatment:

The yoga treatment was conducted in the Psychiatry Ward, Nehru Hospital, P.G.I.M.E.R. Chandigarh. It was carried out under the guidance of Chandigarh Yog Sabha which is one of the branches of 40 well established yoga centres operating in the various states throughout the country under the guidance of Swami Devi Dayalji. It comprised of cleaning processes (Kriyas), postural patterns (Asanas) and breathing exercises (Pranayama), (Devi Dayalji 1965, 1971, 1980). A total of 15-20 sessions of 45 minutes duration each were given, spread over 4-6 weeks. At the end of this time, post-treatment evaluation was done and the patients were asked to continue the practice at home. Followup assessment was conducted at the end of 3-4 months.

#### Assessment:

Assessment was carried out at three different points in time i.e. at intake, at the end of 4-6 weeks of treatment and at the end of 3-4 months of follow-up. In order to ensure a comprehensive and a valid evaluation, each patient was assessed by 3 methods. First of all, the patient's subjective complaints were noted in exactly the same words as expressed by him in order to get the patient's view of the disease for which he sought help. At the end of treatment and at follow-up, each symptom which was reported at intake was read back to the patient and he was asked to report the percen-

tage improvement. The overall improvement was calculated by averaging the improvement on each symptom. The second method of assessment was by the clinician. The consultant in charge of the case evaluated the following syndromes by means of semi-structured interview.

- i. Anxiety
  - a) Autonomic anxiety
  - b) Psychological anxiety
- ii. Depression
- iii. Musculo-cutaneous symptoms (aches, pains, general weakness, exhaustion, easy fatiguability)
- iv. Vegetative symptoms (appetite, sleep, libido)
- v. Other neurotic features (obsession – compulsions, hypochondriases, hysteria and phobia)
- vi. Disability – Personal, Social and Vocational.

The symptoms were rated on a four point scale i.e.:

Rating	Description
0	- Absent
1	- Mild or Trivial
2	- Moderate i.e. symptoms definitely present during the past month but of moderate clinical intensity or intense and present less than 50% of the time.
3	- Severe i.e. symptoms clinically intense and present more than 50% of the time.

Finally, the third method of assessment was by means of the following standardised psychological tests:

1. P.G.I. Health Questionnaire N = 2 (Verma 1978).
2. Middlesex Hospital Questionnaire (Srivastava and Bhatt 1974).
3. Amritsar Depressive Inventory (Singh et al 1974).
4. Psychiatric Disability Scale (Srinivasa Murthy et al 1975).

The attitude towards yoga was measured by the P.G.I. Yoga Attitude Scale (Grover et al 1983, 1987).

Correlations were performed between the yoga attitude and changes as measured by each independent criteria i.e. subjective ratings, clinical ratings and the psychological tests. The subscales of the Middlesex Hospital Questionnaire and the Psychiatric Disability Scale were also included in the analysis.

## Results

### 1. Scores on the P.G.I. Yoga Attitude Scale.

Mean scores on the P.G.I. Yoga Attitude Scale at intake, at post-treatment and follow-up are given in Table 1.

Table 1  
Comparison of the mean scores on the P.G.I. Yoga Attitude Scale at intake, post-treatment and follow-up.

	Intake I	Post-treatment (4-6 weeks) II	Follow-up (3-4 months) III
Mean	37.85	43.25	44.95
(S.D)	11.41	6.26	6.26
<i>Comparisons</i>		<i>t-values</i>	
I vs II		2.13*	
II vs III		1.14	
I vs III		2.56**	

\*P < 0.5    \*\*P < .01

There was a significant increase in the scores on the P.G.I. Yoga Attitude Scale at the end of 4-6 weeks. This indicated that

Table 2  
Correlations between attitude and outcome

Evaluation	Correlation (rho)	
	Attitude at intake and improvement after 4-6 weeks	Change in attitude and improvement after 5 months
<b>Patients Subjective Report</b>	0.21	0.13
<b>Clinical Ratings</b>		
1. Total	0.22	0.32
a. Autonomic anxiety	0.22	0.05
b. Psychological anxiety	0.06	- 0.12
c. Depression	0.17	- 0.13
d. Vegetative symptoms	0.30	0.30
e. Musculo cutaneous symptoms	0.23	- 0.08
f. Personal distress	0.06	0.54 **
g. Social distress	0.57 **	- 0.06
h. Vocational distress	0.46 *	0.18
i. Other neurotic features	0.10	0.20
<b>Psychological Tests</b>		
i. P. G. I. Health Questionnaire N-2	- 0.08	- 0.33
ii Middlesex Hospital Questionnaire (Total)	- 0.13	0.18
a. Free floating anxiety	- 0.33	- 0.10
b. Obsessional traits and symptoms	- 0.01	0.38 *
c. Somatic concomitants of anxiety	0.11	0.34
d. Depression	- 0.07	0.06
e. Hysterical personality traits	0.11	0.08
f. Phobia	- 0.06	0.18
iii. Psychiatric Disability Scale (Total)	0.27	0.14
a. Personal disability	0.18	0.42 *
b. Social disability	0.05	- 0.09
c. Vocational disability	0.60 **	- 0.37
iv. Amritsar Depressive Inventory	0.15	0.24

\* P < 0.05

\*\* P < 0.01

the attitude of the group had become more favourable. Further change in the attitude at follow-up was slight and insignificant. Overall, the total changes in the attitude from intake upto the end of the 5 months study period was highly significant.

2. Relationship between attitude and treatment outcome.

Correlation between scores on the P.G.I. Yoga Attitude Scale at intake and outcome at the end of 4-6 weeks of treat-

ment have been given in table 2. Also given in the same table is the correlation between change in scores of the P.G.I. Yoga Attitude Scale and change in clinical ratings and the psychological test scores. It can be seen from table 2 that there was significant correlation between the attitude at intake and improvement at the end of 4-6 weeks on only the following variables i.e. social and vocational disability as measured by the Psychiatric Disability Scale. Change in the Yoga attitude over 5 months with improve-

ment over the same time period showed significant positive correlation with personal disability or distress as measured by the clinician as well as by the psychological tests.

### Discussion

At intake, the mean scores of the group on the P.G.I. Yoga Attitude Scale was 37.52, comparable to that obtained by persons who have never practiced yoga (Grover et al. 1983; 1987). Infact many of the subjects reported that they did not have sufficient information about yoga and hence ticked "Uncertain" to most of the questions. During the first 4-6 weeks not only was training given in the various techniques of yoga but also there were discussions on its various aspects. This was done to enable the patient to develop an adequate conceptual frame work which would help to provide the motivation needed to continue the practice regularly at home. Probably, as a result of this, there was a significant change in the attitude towards yoga (Table 1). Similar positive change in the attitude to yoga after training has been reported by Kocher (1971-72).

Correlations performed between the attitude scores at intake and the outcome at the end of 4-6 weeks showed a significant positive relationship between improvement in social and vocational disability and the attitude. Friedman (1963) reported a direct relationship between expectancy and symptom reduction. However, the symptoms most affected were those associated with anxiety and depression only.

It seems possible that as the attitude of the group was itself becoming more positive, it was giving rise to the improvement in neurosis or at least some of its symptoms. Therefore, correlations were

performed between the change in the scores on the P.G.I. Yoga Attitude Scale and the improvement over the 5 month study period. The results showed a significant positive correlation between reduction in the personal distress or disability and the change in the attitude towards yoga. Interestingly enough, this was seen on the clinical ratings as well as on the Psychiatric Disability Scale. This finding is supported by those reported by Richert (1976) and Frank et al (1959). Richert (1976) reported a significant positive correlation between the degree of improvement expected by the patient before the treatment and personal satisfaction at the end of 20 sessions of psychotherapy in 26 neurotic college graduates. The degree of improvement expected was not related with two other outcome criteria based on cognitive changes. Frank et al (1959) also reported that the patient's subjective discomfort declined regardless of the nature of the treatment. This as well as the findings obtained in the present study suggest that it is the most subjective aspect of the illness i.e. the personal distress, which is susceptible to the non-specific factors such as expectancy and attitude operating within the treatment settings. A significant positive correlation was also observed between the improvement in the obsessional traits and symptoms measured on the Middlesex Hospital Questionnaire Subscale. However this was not confirmed by the clinical ratings.

The present study indicates that the attitude of the patient is not related with improvement in the anxiety, depression, musculocutaneous symptoms, vegetative symptoms, hysteria, phobia or hypochondriasis. Thus the changes in the neurotic symptoms after yoga therapy cannot be attributed to the confounding or biasing influences of the attitude towards yoga. The changes are

more likely due to the therapeutic effects of yoga as such.

We have also carried out the study of the role of attitude in influencing the treatment acceptance and dropout which is being reported separately.

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