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FACTORS INFLUENCING TREATMENT ACCEPTANCE IN NEUROTIC PATIENTS REFERRED FOR YOGA THERAPY—AN EXPLORATORY STUDY

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SUMMARY

A total of 186 neurotic patients seeking treatment in the psychiatry outpatient clinic of the Nehru Hospital, P. G. I. M. E. R. were assigned consequently to three treatments i.e. Yoga therapy (Y), Yogic Relaxation (YR) and Chemotherapy (C). A record was kept of the number of visits made by each patient during the 5 months study period. In order to find out the factors associated with treatment acceptance, a comparison was made of those subjects who completed 4-6 weeks of treatment with those who dropped out before completing the treatment in the yoga group. The dropouts and non-dropouts were found to be comparable on sociodemographic and clinical variables. They were also similar with regard to the attitude to yoga. The only factor which distinguished the two groups was the severity of illness at intake. Those who continued treatment had significantly higher scores on the P. G. I. Health Questionnaire N-2 and the clinical ratings of the severity of illness. Further, analysis of stage at which dropout occurred, and the responses to the reply paid questionnaire indicated that treatment failure was not the main reason for dropout.

A large percentage of outpatients terminate their treatment by dropout rather than by mutual agreement. Studies conducted in India as well as abroad have showed that the termination rate from chemotherapy and psychotherapy is high, and longer the study period, greater is the dropout rate (Srinivasamurthy et al., 1974; 1977; Khanna, 1973). Over the past 25 years, the dropout rate from psychotherapy ranged from 50-60% by the 4th session (Kelner, 1982; Garfield, 1971). It is generally assumed that dropouts constitute treatment failures. Due to the difficulty in contacting patients who terminate the treatment on their own, the studies which have examined this problem directly by asking the patients reasons for discontinuation are few in number. Latter, however, did not support the view that the patients discontinued due to treatment failure (Pekarik, 1983; Acosta, 1980; Garfield, 1963).

A study of the reasons for dropouts becomes important in an outcome research, especially when a new treatment method is being examined for efficacy. Dropouts pose various problems in the interpretation of data. For instance, if dropouts constitute treatment failure and those who do complete the treatment from a biased sample of positive responders, then the generalisation of the conclusions obtained to larger sample will be erroneous unless the reasons for dropouts can be ascertained or if it can be shown that dropouts and non-dropouts were comparable on the various clinical and sociodemographic characteristics. Also, if dropouts constitute treatment failures, as is generally assumed, then, their omission while reporting outcome can give a false idea about the treatment efficacy. For instance, Eysenck (1971), while making a compilation of the various psychotherapy outcome studies, added the dropouts in the 'not improved' group, thus automatically significantly reducing the improvement rates.

The outcome studies on yoga therapy

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have not reported the dropout rate, neither has any attempt been made to find out its reasons. An understanding of the factors associated with dropout is needed not only to validate the outcome figures of yoga therapy but also to find out if yoga therapy can be feasible as a regular method of treatment in the psychiatric out-patient clinic in the general hospital settings. It was with these considerations in mind that the present study was undertaken.

MATERIAL AND METHODS

A group of 186 neurotic patients fulfilling the selection criteria were assigned consequently to three treatments i.e. yoga therapy, yogic relaxation and chemotherapy. A record was kept of the number of visits made by each patient. The dropout rate at various points in time was compared in the three groups during the 5-month study. For the yoga group, a comparison was made of the dropouts and non-dropouts on the various sociodemographic and clinical characteristics, the severity of illness at intake and the attitude to yoga. Also dropouts were mailed a reply paid questionnaire enquiring if the patients had benefitted from the treatment, if they still felt the need for treatment and the various environmental constraints such as lack of time, money, distance etc. which may have lead to the discontinuation of treatment. An analysis of the various factors associated with dropout was made, not only to help a therapist take adequate measures to minimize dropouts, but also to ascertain if the dropouts represented treatment failure or not.

Sample

The sample comprised of neurotic patients attending the psychiatric out-patient clinic at the Nehru Hospital, P. G. I. M. E. R., Chandigarh. Included were those cases with an age range of 18-45 years, with a minimum duration of illness of 6 months and with a diagnosis of Anxiety Neurosis, Neurotic Depression, Neurosis N. O. S. and Neurasthenia (as per the I. C. D. IX. Nos. 300.0, 300.4, 300.5 and 300.9 a respectively. Excluded were those cases with other than the mentioned diagnosis.

Assessment

The sociodemographic and clinical characteristics were noted during the detailed clinical interview by the resident incharge of the case. The consultant incharge of the case gave a rating of the various symptoms of neurosis using a semi-structured interview. The following symptoms were evaluated :

1. Anxiety
   (a) Psychological
   (b) Somatic
2. Depression
3. Musculo-cutaneous symptoms
4. Vegetative functions
5. Other neurotic features (obsessions, compulsions, hypochondriasis, hysteria and phobia).
6. Disability—Personal, Social and Vocational.

The symptoms were rated on a four point scale as follows :—

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 less than 50% time.
3	:	Severe i.e. symptoms clinically intense more than 50% of the month.

Four psychological tests were administered in the order as given below :

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 (Srinivasamurthy et al., 1975).

Finally, P. G. I. Yoga Attitude Scale (Grover et al., 1983; 1987) was administered to the patients in the Yoga group.

The patients were assigned consequently to three treatments i.e. Yoga therapy, Yogic Relaxation and Chemotherapy. The subjects in the two yoga groups were required to attend 15-20 sessions of yoga therapy, spread over 4-6 weeks. Each session was of 45-60 minute duration. At the end of supervised training, they were asked to continue the regular practice of yoga at home. A record was maintained of the number of sessions attended.

RESULTS

1. Treatment acceptance

The breakdown of the total sample in terms of treatment continuation has been given in Table 1.

It can be seen that an average of 26.3% subjects did not report after the intake evaluation, about 24% continued in the study for less than 4 weeks. Thus nearly 50% subjects discontinued before the treatment could be completed. The dropout rate in the three groups was comparable.

Table 2 gives a detailed breakdown of the yoga group according to the number of sessions attended.

It can be seen that nearly 21.6% subjects did not report after intake, 19.0% dropped out without attending even 4 sessions and 12% subjects attended 5–14 sessions.

2. Comparison between subjects who completed treatment with those who dropped out before completing the treatment :

(a) Sociodemographic and clinical variables

A comparison was made between those subjects who discontinued before the yoga treatment of 15 sessions could be completed with those who completed the treatment (Table 3). The two groups were comparable with reference to age, sex, marital status, religion, education, occupation and residence.

Table 4 showed that the two groups were also comparable on all the clinical characteristics studied i.e. duration of illness, diagnosis, onset, precipitating factors, course of illness and the family history of psychiatric illness.

(b) Severity of illness and the attitude towards yoga at intake

Table 5 showed that those who completed the treatment had significantly higher scores than those who dropped out before completing the treatment on the P. G. I. Health Questionnaire N-2. The Clinical Ratings illness were also significantly higher in the treatment completers. The two groups were comparable on the scores on the P. G. I.

TABLE 1. *Breakdown of the total sample in terms of treatment continuation in the three groups*

Treatment continuation	Yoga therapy (N=57)	Yogic relaxation (N=59)	Chemotherapy (N=70)	Total (N=186)
1. Did not report after intake	21.1%	22.0%	34.3%	26.3%
2. Dropped out before 4-6 weeks	33.3%	30.5%	11.4%	24.1%
Total	54.4%	52.5%	45.7%	50.4%
3. Completed 4-6 weeks treatment	45.6%	47.5%	54.3%	49.5%

NOTE : Percentage based on column totals.

TABLE 2. *Treatment continuation in the two Yoga groups*

	Yoga therapy (N=57)	Yogic relaxation (N=59)	Total (N=116)	Percentage
1. *Treatment not completed*				
(a) Did not report after intake	12	13	25	21.56
(b) Came for 1-4 sessions	10	12	22	18.98
(c) Came for 5-10 sessions	6	3	9	7.76
(d) Came for 11-14 sessions	3	3	6	5.13
Total	31	31	62	53.45
2. *Completed treatment*	26	28	54	46.55

TABLE 3. *Comparison of the sociodemographic characteristics of subjects who completed treatment with those who did not complete treatment in the two Yoga groups*

1	Treatment not completed (N=62) 2	Treatment completed (N=54) 3
Age (years)		
Mean	32.80	32.18
S. D.	9.82	9.43
Sex		
Male	44	38
Female	18	16
Marital Status		
Married	44	32
Single	18	22
Religion		
Hindu	45	41
Sikh & Others	17	13
Distance		
Local	38	33
Non-local	24	21

TABLE 3—(*Contd.*)

1	2	3
Education		
Upto Inter	46	35
Above Inter	16	17
*Occupation**		
I	32	20
II	7	8
III	23	26

*I—Professionals, Semiprofessionals.
II—Clerical/Skilled/Semiskilled/Unskilled worker.
III—Housewife, Unemployed, Student.
NOTE : All the Chi-square values were statistically insignificant (n.s.)

TABLE 4. *Comparison of the clinical characteristics of subjects who completed treatment with those who did not complete treatment in the two Yoga groups*

	Treatment not completed (N=62)	Treatment completed (N=54)
Duration of illness (Years)		
Mean	5.12	5.25
S. D.	5.86	6.00
Diagnosis		
Anxiety Neurosis	28	27
Depression	30	25
Others	4	2
Onset		
Acute	22	15
Subacute	5	6
Gradual	35	33
Precipitating factors		
Present	29	19
Absent	33	35
Course		
Static	19	17
Progressive	33	26
Intermittent	9	11
Declining	1	0
Family History		
Present	8	9
Absent	54	45

NOTE : All the Chi-square values were non-significant (n.s.)

TABLE 5. *Comparison of subjects who completed treatment with those who did not complete treatment on the severity of illness and attitude towards Yoga at intake*

	Treatment not completed (N=62)	Treatment completed (N=54)	't' value
1. *Clinical ratings*			
Mean	11.35	13.76	2.59**
S. D.	4.67	4.42	
n.	(41)		
2. *P.G.I. Health Questionnaire N-2*			
Mean	22.21	27.05	2.15*
S. D.	11.75	12.98	
3. *Amritsar Depressive Inventory*			
Mean	15.00	14.56	0.30
S. D.	8.10	7.51	
4. *Middlesex Hospital Questionnaire*			
Mean	46.50	46.39	0.04
S. D.	17.04	14.32	
5. *Psychiatric Disability Scale*			
Mean	11.33	12.27	0.76
S. D.	7.13	6.13	
6. *P.G.I. Yoga Attitude Scale*			
Mean	37.75	38.61	0.45
S. D.	10.21	10.26	

*p<0.05 **p<0.01

Yoga Attitude Scale, Middlesex Hospital Questionnaire, Amritsar Depressive Inventory and Psychiatric Disability Scale.

3. Practical problems reported by the subjects

In order to explore the practical problems faced by the subjects in completing the treatment, a reply paid questionnaire was mailed to 62 subjects who dropped out before the 5-months study period could be completed. Only 22 replies were obtained, 6 from those subjects who never reported after intake, 8 who dropped out before completing 5 sessions, and 8 who did not report after 5-14 sessions of treatment. The responses in each category have been given in Table 6.

Although the number of replies obtained was too small to formulate any definite conclusions, the following trend was obtained. Various practical problems reported by the patients included an inability to come repeatedly (63.6%) and the time required for the treatment (59.1%). Distance and expense was reported less frequently i.e. 36.4%. Only 9.1% subjects reported to be seeking treatment elsewhere. Responses to treatment as seen on the questionnaire showed that 14 out of 16 subjects (87.5%) reported to have benefitted from the treatment. Thus, partial relief from illness

TABLE 6. *Summary of response to the reply paid questionnaire by dropouts*

	'O' Visits N=6	1-4 Visits N=8	5-14 Visits N=8	Total N=22	%
1. *Experienced benefit*	—	6	8	14	87.5**
2. *Environmental constraints*					
Distance	1	4	3	8	36.4*
Time	3	4	6	13	59.1
Expense	2	3	3	8	36.4
Repeat visits	3	6	5	14	63.6
3. *Seeking treatments elsewhere*	1	1	0	2	9.1

*Percentage calculated from total N=22.

**Percentage calculated from N=16 i.e. total number of patients who attended 1-14 sessions.

may have reduced the motivation to report further and due to this, the patient was unable to overcome the environmental constraints.

DISCUSSION

The dropout rate in the yoga therapy and chemotherapy was comparable despite the fact that yoga treatment required a much greater effort and time from the patient. Dropout rate in the yoga group was also comparable to that reported by others for drug therapy. Various studies have reported a dropout rate of 25.53% in clinical trials of 3-6 weeks duration (Shah et al., 1963, 1962; Bagadia et al., 1972, 1973; Masters et al., 1974; Singh et al., 1984). Srinivasamurthy et al. (1974) reported that out of 45 cases of anxiety neurosis, depressive neurosis and other neurosis which were given a detailed work up, only 15(33.3%) had either completed the treatment or were continuing to receive treatment from the out-patient clinic. Khanna (1973) also reported that only 30.72% neurotic patients attended the hospital three or more times after registration. These studies confirm the findings of the present study where the dropout rate at the end of 4-6 weeks ranged from 45.7% to 54.4%. Similarly, 40-60% dropout rate has been reported by Garfield (1971) and Kelner (1982).

A study of various factors associated with dropouts showed that those subjects who completed treatment were comparable to those who discontinued the treatment on all the clinical and sociodemographic variables studied. Others have also reported that efforts to identify dropouts on the basis of demographic, clinical or personality variables has produced no positive results. None of the instruments or variables displayed a significant capacity to select the premature terminators (Kelner, 1982). The findings of Srinivasamurthy et al. (1977) that there is a high dropout rate amongst the educated i.e. college and professionals, was not observed in the present study.

In the present study, the severity of illness was greater in those subjects who completed the treatment. Srinivasamurthy et al. (1977) also reported that the subjects who presented with acute and distressing symptoms readily accepted and continued the treatment. Wig et al. (1979) also reported that patients who completed the treatment had greater psychiatric disability in comparison to those who dropped out. Garfield (1971) also reported greater treatment compliance in subjects with high anxiety.

Surprisingly, the patient's attitude towards yoga did not show any relationship with the treatment acceptance. It might have been due to the fact that many of the patients were ill informed about yoga and may have viewed yoga as part of the regular hospital treatment. Heine and Trosman (1960) also reported that the degree of conviction that the treatment would help was unrelated to continuation.

The present study suggests that treatment failure probably did not make a significant contribution to dropout. Out of 62 dropouts, 47 (75.8%) discontinued before even 5 sessions were completed (Table 2), thus not giving a chance to the treatment to exert its effects. The response to the reply paid questionnaire indicated that partial relief was experienced by 87.5% subjects who dropped out after attending 1-14 sessions. Although the number of replies received to the dropout questionnaire was too small for any definite conclusions, the findings are along similar lines to those of others who have reported that the dropouts do not represent treatment failures (Acosta, 1980; Garfield, 1963; Pekarik, 1983).

Various practical problems were reported by the subjects undertaking yoga therapy (Table 6). The most common one was the difficulty in coming repeatedly and the time required for treatment. Distance and financial contraints were relatively less important. Perhaps partial relief from the illness reduced the

motivation to overcome these practical problems.

Various ideas emerge from this study. First of all, the dropout rate from yoga therapy is comparable to that observed in the other modes of treatment i.e. chemotherapy or psychotherapy. Secondly, it appears that the main motivating factor for completing the treatment was the severity of illness at intake. Attitude towards the treatment and sociodemographic factors such as age, sex, education and occupation did not influence the treatment compliance. Rather than treatment failure, partial relief may have contributed to reply paid questionnaire and the stages at which dropout occurred. Thus, if the therapist can build an adequate rapport with the patient so as to be able to communicate with him/her effectively the necessity of completing the treatment and maintaining a regular home practice, it may help to reduce the dropout.

Finally the practical problems reported by the patient i.e. of difficulty in repeated visits, and the time required for learning, brings home an important consideration while selecting techniques of yoga treatment. A survey of various yoga centres showed that yoga treatment for one particular disease has not been standardised and the combination of techniques used varies from one yoga centre to the next (Grover, 1986). There is no recorded data on the relative efficacy of one approach over the other. Hence during research on yoga therapy, not only the efficacy but its feasibility needs to be kept in mind. A treatment approach suitable for out-patient clinic settings needs to be as economical as possible in terms of the patients' time and need for repeat visits. It should be simple enough to master, without too difficult or rigorous a practice, so that the risk of wrong home practice and its adverse ill effects is minimised. These considerations may be kept in mind in the future research studies on yoga therapy.

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