AUTOGENIC THERAPY IN TENSION HEADACHE

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SUMMARY

Ten subjects diagnosed as Psychalgia were taken for study. A multiple baseline design was adapted and clients were subjected to 30 sessions of autogenic training. They were assessed using physiological (EMG and thermal change) and behavioural measures (Visual analogue scale and behavioural symptom checklist). Findings revealed autogenic therapy to be effective in reducing tension headache.

Verbal relaxation procedure has been the treatment of choice in tension headache cases, mainly because of its cost effectiveness (Janssen and Neutgens 1986). Autogenic training of Schultz and Luthe (1969) is one of the relaxation techniques. It is a psychophysiological self control method and has been found effective in a number of pain conditions including migraine cases (Mitch and McGrady and Jannone 1976, Fahrion 1977, Janssen and Neutgens 1986).

Anderson et al (1981) obtained positive results in two tension headache cases using Autogenic training. Juenet et al (1983) found autogenic training to be less effective than GSR feedback. However in their study taped instructions were used.

There are very few reports on the use of autogenic training in the treatment of tension headache. Further the objective assessment of psychophysiological measures of improvement are very rarely reported in the studies. The present study aims at studying the effect of autogenic therapy on tension headache, the improvement being measured both through psychophysiological and behavioural measures.

Material and Methods

A group of patients diagnosed as Psychalgia (307.8) on the ICD-9, were referred from the Neurology, Neurosurgery and Psychiatry out-patient department of the National Institute of Mental Health and Neurosciences, Bangalore. Ten cases were then selected for study as per the inclusion and exclusion criteria.

Inclusion Criteria

a. Age between 18 and 40 years.

b. Duration of headache more than 3 months.

c. Diffuse, dull aching, bandlike, bilateral or unilateral headache.

d. Headache clinically declared as nonneurological.

Exclusion Criteria

a. Headache associated with vomiting.

b. Uncorrected refractive errors of the

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eye or any other detected organic cause that could explain the headache.

The sample consisted of 6 males and 4 females with a mean age of 30 years and mean duration of illness being 63 months.

The cases thus selected were then administered the following scales.

Visual Analogue Scale (Aitken 1955)

It is a measure of the patients subjective rating of improvement. It consists of a straight line of 10 cms which has been marked at one end as no headache and at the other end as most severe headache. The scale is scored by measuring the length of the line in centimeter from the beginning of the line to the point at which patient has marked his feeling of distress.

Behavioural Symptom Checklist (Mishra 1974)

The severity of the disorder in the patient is assessed on a 5 point scale (0-4). Each item score is added to get the total score.

Subjective Report of Headache

Based on the intensity, frequency and duration of headache.

The therapeutic assessments of the psychophysiological changes was then done for the next three consecutive days. On these days the following psychophysiological changes were recorded simultaneously.

Electromyogram (EMG)

It is the electrical activity which accompanies muscle action. Muscle electrodes were attached to the forehead. The EMG is a direct physiological index of muscular contraction or relaxation.

Finger Temperature

An increase in finger temperature is accompanied by vasodilation and results in relaxation of sympathetic activity.

Following this pre-assessment each of

the clients were subjected to 30 sessions of Autogenic therapy. In this form of therapy, the patient was made to lie down with his legs slightly apart and relaxed. The head was in a comfortable position which was not stiff or cramped. The subject had to repeat each of the 6 formulae 3-6 times for a 30-60 second period. Following are the six formulae:

1. Culturation of heaviness in the body

2. Culturation of warmth in the body

3. Regulation of the cardiac

4. Regulation of respiration

5. Warmth in the abdomen or solar plexus

6. Agreeable coolness in the forehead. (Schultz and Luthe 1969).

Each of the therapy session was of 30 minutes duration and was conducted everyday with each client.

On the 15th day of treatment, the clients were assessed on the physiological and behavioural measures for 3 consecutive days, to facilitate a multiple baseline design. Autogenic therapy was in progress during the period of assessment without any breaks.

The third and final assessment was done for 3 days at the end of 30th day of treatment. Comparison of changes in the multiple baseline data was done.

Results

Table 1

Mean, SD and 't' values of EMG measures

	Initial	Middle	Final
Mean	5.42	3.12	2.51
S. D.	2.62	0.90	0.99

't' values
Initial   – Middle   : 2.81 *
Middle   – Final   : 3.18 *
Initial   – Final   : 3.26 *
* Significant at 0.05 level

Table 2
Mean, SD and t values of the initial, middle and
final thermal measures

	Initial	Middle	Final
Mean	33.86	34.50	34.93
S.D.	0.78	0.43	0.65

't' values

Initial – Middle : 3.58 **
Middle – Initial : 2.27 *
Initial – Final : 4.04 **
 * Significant at 0.05 level
** Significan at 0.01 level

Table 2 indicates that the mean of the mental thermal measures has increased from the initial (33.86) to the middle (34.50) and this difference is significant at 0.01 level. The increase in thermal measure from initial to final is significant at 0.01 level, while the increase from middle-final is significant at 0.05 level.

Table 3
The mean, SD and t values of initial, middle and
final assessment of psychological and behavioural
measures

	Visual Analogue Scale			Behavioural symptom checklist		
	Mean	S.D.	t-value	Mean	S.D.	t-value
Initial	9.22	0.50	–	16.8	8.75	–
Middle	7.70	1.96	–	15.7	10.71	–
Final	5.88	3.44	–	15.0	12.49	–
Initial-Middle	–	–	4.07 **	–	–	1.21 NS
Middle Final	–	–	3.64 **	–	–	0.87 NS
Initial-Final	–	–	3.30 **	–	–	2.58 NS

** Significant at 0.01 level
NS – Not significant

Table 3 indicates that the mean decrease in the measures of the visual analogue scale from initial to middle is significant at 0.01 level and also from initial to final. However the decrease in the mean measures of the behavioural symptom checklist is not found to be significant.

Discussion

In this study, autogenic training was effective in bringing about significant changes in physiological measures namely a significant decrease in EMG and a significant increase in the thermal measure.

Balick et al (1983) noted significant reduction in EMG levels to be associated with significant reduction in pain following autogenic and biofeedback training. Holmes and Burish (1983) have postulated that increased peripheral blood flow is associated with decreased sympathetic tone and increased relaxation.

Thus autogenic training has been found effective in decreasing EMG levels and increasing finger temperature. The present study however, does not support the findings of Banner and Meadow (1983) wherein it was noted that autogenic training does not bring about significant decrease in tension as measured by physiological measures (EMG and finger temperature).

Autogenic training was also effective in bringing about a significant decrease in the perception of pain and also in decreasing the intensity, frequency and duration of headache. The findings of this study are similar to Labbe and Williamson (1983) and Anderson et al (1981).

Thus autogenic training has been found effective in bringing about a significant reduction of pain. It was observed that 70% of the sample showed improvement in psychological as well as somatic manifestations associated with headache such as numbness at extremities, restlessness, tremor and palpitation, feeling malaise, pain in head, back, neck and limbs. The other 30% either showed an increase or remained constant in symptoms like worrying, feeling of inferiority, loss of sleep and appetite, which perhaps could be explained in terms of psychopathological phenomena underlying the presenting complaint.

Conclusion

Autogenic Therapy has been effective in reducing tension headache, indicated by clinical as well as psychophysiological indices. However for generalization a larger sample needs to be studied.

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