SUMMARY
CHAPTER VI

SUMMARY

Severe vertigo is a vastly distressing symptom and it can have devastating effects on behaviour. When one considers the disruption of the patient’s routine, the severity of attacks, and the fear of the unknown, it is no wonder that the patient may become agitated, anxious, or depressed. At times this disability can be so severe that a patient is no longer able to perform his normal occupation. Even a mild case of Meniere’s disease in an airline pilot would cause him to be totally disabled in his regular occupation. The attorney who has a busy schedule, including court appearances, may find himself incapacitated because of episodes of vertigo. The housewife who has attacks of vertigo lasting several hours may find that she is no longer comfortable doing her shopping. The actual symptoms are not the only destructive effects.

Clinicians have a continuing interest in the psychological aspects of those suffering from vertigo. They have frequently observed peculiar personality characteristics in vertigo patients, such as aggressive dependency, emotional lability, and overreactivity. Chronic continuous vertigo may be a sign of depressive illness. Emotional factors may influence symptoms of organic origin-
for example, stress may provoke bouts of Meniere's disease as it does asthma and migraine. Perhaps because of this, several studies have attempted to establish the extent to which emotional factors are present in patients with vertigo. The findings, however, are limited as well as inconclusive. As such, the role of psychological factors in patients with vertigo has been widely debated. Thus, the main objectives of the present study are:

1. To examine the different dimensions of psychological distress* of different types of vertigo patients as well as normal individuals.
2. To examine different groups of patients suffering from vertigo with respect to:
   (a) age,
   (b) sex,
   (c) marital status,
   (d) educational status,
   (e) occupational status,
   (f) type of family,
   (g) family relations.
3. To analyse the audio-vestibular functions of different groups of vertigo.

* (a) defective integration, (b) ego-weakness, (c) guilt feelings, (d) frustrative tension, (e) paranoid tendency, (f) depressive tendency, (g) introversion, (h) social desirability, and (i) loneliness.
Hypotheses

The present study starts with the following hypotheses:

1. The vertigo patients will score significantly higher on different dimensions of psychological distress than normal subjects.

2. There will be no difference between different types of vertigo patients on different dimensions of psychological distress.

3. Vertigo patients will not differ amongst themselves and from normal subjects on demographic as well as social characteristics.

4. It is expected that Meniere’s disease and BPPV patients will differ from other groups on various audio-vestibular measures and in Cervical spondylosis, Hypertension, and Psychogenic there will be no difference on audio-vestibular dimensions.

Subjects

A total of hundred subjects were subdivided into five groups of 20 subjects each, viz. Cervical spondylosis, Benign Paroxysmal Positional Vertigo (BPPV), Meniere’s disease, Hypertension and Psychogenic Vertigo. The sample was drawn from the ‘Vertigo clinic’ run by Department of Otolaryngology, Postgraduate Institute of Medical Education and Research, Chandigarh.
A matched control group comprising of 20 normal subjects was also drawn randomly from the employees of the department.

**Tools used**

The following tools were used:

1. Pure tone audiometry
2. Speech audiometry
3. Impedance audiometry
4. Tone Decay Test
5. Cold caloric test
9. IPAT Anxiety Scale Questionnaire (Cattell and Scheier, 1963).

**Measures obtained**

The following measures were obtained for each subject:

(A) Psychosocial measures

(B) Audio-vestibular measures

(A) **Psychosocial measures**

The tests were scored strictly in accordance with the procedure suggested by the authors of different tests. As a result of scoring different tests several measures mentioned below were obtained:
1. Two measures of personality using Personality Trait Inventory (Verma, Pershad, and Arunima, 1990)
   i) Introversion
   ii) Social desirability

2. Five measures concerning second order factor of anxiety were obtained by scoring IPAT anxiety scale questionnaire (Cattell, and Scheier, 1963)
   1. Q_3 : Defective integration, lack of self-sentiment
   2. C : ego weakness, lack of ego strength;
   3. L : Suspiciousness or paranoid-tendency;
   4. O : Guilt proneness;
   5. Q_4 : Frustrative tension or id pressure.

3. A single measure of loneliness was obtained by scoring Revised UCLA Loneliness Scale (Russell, Peplau, and Cutrona, 1980).

4. A single measure of depression was obtained by scoring Zung Self-Rating Depression Scale (Zung, 1965).

5. Information about the age, sex, occupational status, educational status, type of family and marital status was also obtained for each subject.

* The scores on seven dimensions, namely activity, cyclothymia, super-ego, dominance, depressive tendency, paranoid tendency, and emotional instability have not been used since these measures have been obtained by the separate scales i.e. Zung’s Self-Rating Depression Scale, revised UCLA Loneliness Scale and IPAT Anxiety Scale Questionnaire.
(B) **Audio-vestibular measures**

The following audio-vestibular indices were obtained:
1. Puretone thresholds.
2. Speech reception threshold and speech discrimination scores.
3. Middle ear status.
4. Differentiating cochlear vs retrocochlear pathology.
5. Caloric testing.

**Analysis**

Keeping in view the objectives of the study, analysis of variance (ANOVA) was applied to ascertain the relative position of different groups on various dimensions of psychological as well as audio-vestibular functioning. Depending upon the results obtained as a result of the application of analysis of variance, following Goon et al. (1972) critical difference or the least significant difference was also computed. The obtained results have been presented meaningfully in the subsequent pages.

**Main findings**

The results revealed several salient features about vertigo patients.

1. When either group of vertigo patients was compared to control group, significant differences appeared. The vertigo patients in comparison to normal subjects have been found to be more depressed, lonely, distressed and
disturbed. They were more anxious, more lonely, more introverted, experienced a higher mean number of depressive symptoms, had higher paranoid tendencies and showed a greater frequency of psychopathologic profile.

2. The results failed to show that patients with Cervical spondylosis, BPPV, Meniere’s disease and Hypertension differed from each other as a group on various dimensions of psychological distress. No evidence of higher psychiatric disturbance was found in patients with Meniere’s disease.

3. The subjects with psychogenic vertigo showed peculiar characteristics from the viewpoint of psychological vulnerability. Psychogenic vertigo patients as a group have been found to be markedly higher on loneliness, depression, defective integration, ego-weakness, paranoid insecurity and frustrative tension. It is significant to emphasize that this study does not implicate emotion as an etiological agent rather it suggests that psychological distress may play an important role in the severity of symptoms experienced by patients in the category of psychogenic vertigo.

4. The results revealed no evidence of significant difference among different groups of vertigo patients on social characteristics.

5. Audiological investigation showed presence of hearing loss in Meniere’s disease and no characteristic pattern emerged in the case of other four groups though
there was hearing loss at higher frequencies (4K, 8KHz) in BPPV.

6. With respect to vestibular function tests, no characteristic pattern emerged in the case of various groups of vertigo patients, though random abnormalities were seen in the Group II (BPPV) and Group III (Meniere’s disease).

7. In case of patients with Meniere’s disease, audiological tests revealed greater abnormality than vestibular tests.