Acoustic Characteristics of Optimum Voice *

SREEDEVI, H. S.

The present study was conducted to determine the acoustical aspects of optimum voice.

100 subjects (50 males and 50 females) were selected for the study in the age range of 17-50 years.

All the voice samples were tape-recorded. Three judges rated all three voice samples as either being above normal, normal or below normal. The subjects were grouped based upon their perceptual ratings and they were analyzed for their acoustic characteristics. Intra-judge reliability ranged from 40-80% while inter-judge reliability was 85%.

The following parameters were studied in the present study :

1. Maximum phonation duration.
2. S/Z ratio.
3. Fundamental frequency in phonation.
4. Rising time in phonation.
5. Falling time in phonation.
6. Frequency range in phonation.
7. Intensity range in phonation.
8. Speaking fundamental frequency.
9. Frequency range in speech.
10. Intensity range in speech.

* Master's Dissertation, University of Mysore, 1987.

Parameters 3-10 were measured using Pitch Computer (PM-100). Parameters 1 and 2 were measured using stop-watch, using the standard procedure.

The hypothesis 1 *(a)* was accepted for all the parameters except fundamental frequency in phonation and SFF.

Hypothesis-1 *(b)* was accepted for all the parameters except fundamental frequency in phonation using time in phonation, SFF and frequency range in speech.

Hypothesis 1 (c) was rejected for all the parameters except S/Z ratio, falling time in phonation and intensity range in speech.

Hypothesis-2 was partly rejected and partly accepted. It was rejected for the parameters maximum phonation duration, S/Z ratio and fundamental frequency in phonation. It was accepted for the rest of the parameters.

Hypothesis-3 was partly rejected and partly accepted. It was accepted for the parameters rising time in phonation and intensity range in phonation. It was rejected for the rest of the parameters.

Thus, a measure of the parameters selected in the present study indicates the possibility of its usefulness in differentiating above normal voices from normal and below normal voices both in males and females.