Service Priorities and Programmes

Electronic Presentations

Convention ID: 111
Submitting author: Ms Jenny Chui Yam CHAN
Post title: Scientific Officer (Medical) Audiologist, Alice Ho Miu Ling Nethersole Hospital, NTEC

Development of a Cantonese bisyllabic word in noise test

CHAN CYJ (1)(2), WONG LNL (2)
(1) Audiology Centre, Alice Ho Miu Ling Nethersole Hospital, (2) Division of Speech and Hearing Sciences, The University of Hong Kong

Keywords:
Hearing in noise
Aging
Cantonese speech test

Introduction

In the routine hearing clinic, the traditional hearing assessment often includes pure-tone thresholds measurement and word reception thresholds measurement. These thresholds are obtained in quiet sound booth and carry important diagnostic values. However, they do not predict patient's actual performance in noisy real-world listening situations. This study aims at developing a simple Cantonese bisyllabic word in noise test that can record the hearing in noise difficulty often reported by older adults.

Objectives

1. To develop a Cantonese bisyllabic word in noise test. 2. To compare the hearing in noise abilities in a group of young normal hearing adults and a group of middle-aged normal hearing adults.

Methodology

Twenty young Cantonese subjects aged 21-30 and twenty middle-aged Cantonese subjects aged 41-60 were recruited using convenient sampling. All subjects have clinically normal hearing thresholds in both ears. The original bisyllabic Cantonese word recognition material recorded by a male voice (Nissen et al., 2011) was presented at a fixed level of 55 dB SPL. Speech-shaped noise at 57, 60, 63 and 65 dB SPL was mixed with the speech material to create the signal-to-noise ratio (SNR) at -2, -5, -8 and -10, respectively. Each subject listened to 4 lists with different SNRs in his right ear, and another 4 lists with different SNRs in his left ear. Percentage correct scores at different SNRs were recorded.

Result

Data from the young control group has a psychometric slope (at 50% intelligibility) of 11.1% per dB change in SNR. It agrees well with the psychometric slope obtained in other hearing in noise tests using longer sentences, i.e., approximately 10% per dB change in SNR (Soli & Wong, 2008). Preliminary results comparing the young control group and the middle-aged test group showed a difference in their word recognition

abilities in noise.