



An Analysis of Pitch Patterns in Word Utterance  
: Implication for Song Creation

Author : Soo Yon, YI(mtsoo@naver.com)

Music Therapist at Nam-Dong Rehabilitation Center, Korea.

Korean Certified Music Therapist (KCMT)

Ph. D. Candidate in Music Therapy Department at Ewha Womans University



Abstract

This study is to investigate the characteristic of tonal elements in word utterance of 30 pre-school children. For the analyses, 240 utterances of 4 syllable words were processed to extract acoustic values and then the data was transformed into tonal height in order to examine the melodic contour. The results show that the mean pitch of a note is  $C4\frac{1}{2}$  (271.17Hz) and high and low pitched notes are  $C5\frac{1}{2}$  (452.57Hz) and  $G\#3\frac{1}{2}$  (192.54Hz). The pitch patterns of the 4 syllables measured at the frication and aspiration portion are  $E4\frac{1}{2}$ - $F4$ - $B3\frac{1}{2}$ - $A3$  and  $F4$ - $E4$ - $B3$ - $A3$ . The pitch patterns of consonant clusters are  $B3\frac{1}{2}$ - $D4$ - $B3\frac{1}{2}$ - $A3\frac{1}{2}$  and  $A\#3$ - $C4$ - $A3$ - $D4$ . The analyses of tonal elements in this study provide evidentiary data on tonal height helpful for developing melodic contour.

Key words : tonal element, tonal height, melodic contour

