**INTRODUCTION**

Hearing impaired persons because of lack of auditory feedback are at risk for the development of functional voice disorders. Changes of speaking voice of such individuals could cause additional social and psychological problems. Scant data of literature show that individuals with post-lingual severe-to-profound hearing loss typically have their fundamental frequency raised, speaking intensity increased and speaking rate slowed down. We are still lack of the studies of hearing impaired persons speech and voice integrated data. Quantitative voice assessment including speech range profile (SRP) that graphically displays functional speech activity from conversational speech to shouting supports not only in the determination of individual vocal dysfunction degree, but also in making decision for need of voice rehabilitation and assessing progress in voice and hearing rehabilitation applied. The aim of the study was to was to analyze the differences between SRP parameters in moderate-to-severe hearing impaired and well-hearing persons and to establish the key parameters for speech discrimination.

**MATERIALS AND METHODS**

SRPs in combination with voice range profile (VRP) using standard speaking and singing voice protocols were derived from 80 patients (26 males, 54 females) with moderate-to-severe hearing loss, and in percent of location of $F_0$ within the VRP pitch range ($p<0.05$). Overall discrimination accuracy of these two SRP key parameters was 93.3%.

**RESULTS**

When compared to well-hearing persons, both genders of hearing impaired individuals exhibited significantly decreased mean values of speaking intensity range and increased in percentage of location of $F_0$ within the VRP pitch range ($p<0.05$). Hearing impaired males also showed significantly increased mean fundamental and maximum speaking frequencies, habitual intensity and slope of speaking curve while hearing impaired females showed significantly restricted mean speaking tone range and decreased mean maximum speaking intensity (Tables 1, 2). Most of SRP parameters were dependent on gender (Table 3).

**CONCLUSIONS**

Moderate-to-severe hearing impaired persons demonstrated restricted speaking capabilities in comparison to well-hearing persons. Most SRP parameters are gender dependent therefore gender differentiated comparison is recommended.

**REFERENCES**