ABSTRACT

The present research investigated the swallowing characteristics in adults and geriatrics using qualitative and quantitative measures. Eight hundred individuals without dysphagia, divided into four groups based on their age 18 to 40 years (adults), 41 to 59 years (adults), 60 to 75 years (geriatrics), and 76 years and above (geriatrics), were included in the study. Each group consisted of 100 males and 100 females. None of these individuals had history/presence of any speech, language, neurological and swallowing disorders. The study was carried out in two phases. The first phase was devoted for developing a swallowing assessment protocol and standardizing it on the healthy individuals. The tasks for the swallowing assessment were derived from the available literature input on swallowing and the final components comprised of assessment of structure, sensory assessment, motor assessment and the assessment involving trial feeds. Results revealed that there was a variation in the swallowing behavior across the age and gender on the developed swallowing assessment protocol.

On the other hand, second phase comprised of developing normative on the Quantitative measures such as surface EMG, nasal airflow monitoring, and cervical auscultation, which were performed using the Kay Digital Swallowing Workstation and Swallowing Signals Laboratory (Model 7120, Kay PENTAX, Montwale, NJ). All the quantitative measurements were done during dry swallow, thick liquid swallow (rice flakes mixed with water) and thin liquid swallow, with two different bolus volumes (5ml and 10ml). The results revealed that there was an evidence for quantitative variation of swallowing behavior across the age, gender, bolus consistency and bolus volume in healthy adults on the selected objective measures. Thus, the present study reported the normative database for swallowing in the Indian population using
qualitative and quantitative measures in healthy individuals, thereby providing a base for comparison against disordered swallowing behavior in adults and geriatrics.