A Critical Review and Study:

Situationally- *

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This report presents findings from a critical appraisal of the literature as well as the results of a study examining the relationship between listener comfort and a situationally-bound listening scenario for tracheoesophageal (TE), esophageal (ES), and electrolaryngeal (EL) speakers. The critical appraisal included evaluations of one randomized block design, two between groups studies, and three mixed (between and within subjects) design studies. The study involved having naïve listeners (n =12) make auditory-perceptual judgments of listener comfort. Judgments of listener comfort were made based on two separate listening scenarios: one for a suggestive *social communication situation* and the other for a suggestive *telephone conversation*. Findings from the critical review and the study suggest that judgments of listener comfort did not vary for a suggestive listening scenario. However, TE speakers were rated significantly more comfortable to listen to across both listening scenarios compared to the other speaker groups.

Introduction

Disability secondary to voice and speech loss following total laryngectomy has been shown to negatively influence social well-being, as well as postlaryngectomy quality of life (QOL; Doyle, 1999; Eadie & Doyle, 2004; Eadie & Doyle, 2005; Fung & Terrell, 2004). Research in QOL for alaryngeal speakers indicates that they experience a negative impact on daily activities and social participation postlaryngectomy (Doyle, 1999). These activities may include social conversation or speaking on the telephone, therefore creating situationally-bound challenges. By identifying situationally-bound challenges for verbal communication, laryngectomees can make a more informed decision on the method of speech used postlaryngectomy depending on their specific communication needs.

Furthermore, the changes to the acoustic signal postlaryngectomy have the potential to negatively influence listener judgments (Doyle & Eadie, 2005). Although the restoration of postlaryngectomy voice may result in functional levels of communication from the standpoint of intelligibility, decrements in the auditory signal continue to carry a potential penalty for the speaker based on listener judgments. Previous research has shown that tracheoesophageal (TE) speakers are rated significantly better across most auditory judgments compared to esophageal (ES) and electrolaryngeal (EL) speakers, however, TE speakers still differ from laryngeal speakers (Robbins, Fisher, Blom, & Singer, 1984; Doyle & Eadie, 2005). Studies have also shown that the

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Methods

Search Strategy

Computerized databases including Scholars Portal, PubMed , and PsychINFO, as well as ASHA Publications were searched using the following search strategy: [(alaryngeal) AND (speakers) AND [(listener judgments) OR (perceptual judgments)]] or [(listener comfort)] or [(alaryngeal) AND (speakers) AND (audio-visual)]. Reference lists from articles were also used to obtain additional relevant articles.

Selection Criteria

For this review, studies were required to include data on at least one mode of alaryngeal communication, including TE, ES, and EL speakers. In addition, listener judgments were required from naïve listeners through rating scales using either auditory or audio-visual input. One article was chosen based on the criteria of LC judgments, which had employed a stuttering population.

Data Collection

procedure was employed with a modulus to

A strength of the study was the selection criteria for the good-to-superior speakers, demonstrating internal validity. A detailed methods section was provided and the stimuli were appropriate for the objectives of

measurements differed from speech naturalness. Ten adults who stutter (7 male; 3 female) and 10 adult controls matched for age and gender made a video recording while speaking. Each of the adults who stutter made a video recording post-treatment and pre-treatment. Two separate samples from a video recording were chosen for the controls to account eo

ES, EL, and MES speakers (Table 2). No other significant differences were found between the speaker groups. An analysis of the raw data also

Graph 4: *All speakers ranked from most to least comfortable for LC(M). Speakers were found to vary based on listener ratings.*

Discussion

This paper sought to identify situationally-bound judgments of listener comfort for postlaryngectomy voice and speech.

This study accounted for variables that could potentially influence listeners` judgments of LC. Firstly, four randomized lists of speaker samples were created in order to minimize presentation bias. Additionally, the presentation of LC and LC(M) rating scales were also counterbalanced to minimize order effects of the judgments made.

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