

**PERCEPTIONS OF COLLABORATIVE RELATIONSHIPS ABOUT LARYNGECTOMY  
REHABILITATION: A STUDY BETWEEN SPEECH & LANGUAGE THERAPIST AND ENT-  
SPECIALIST**

By

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Bachelor of Science in Speech & Language Therapy

**Bangladesh Health Professions Institute (BHPI)**

*(The academic institute of CRP)*

**Faculty of Medicine, Affiliated by  
University of Dhaka**

**[February, 2019]**

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A research presented to  
the  
Bangladesh Health Professions Institute (*The academic institute of  
CRP*)  
University of  
Dhaka

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**In partial fulfillment of the requirements for the degree  
of  
B. Sc. In Speech & Language  
therapy**

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## **Declaration**

**I am Al Hasib**, want to confirm that any single discussion of my research project will not be harmful to other. All the sources used in this study have been cited correctly. All errors or inaccuracies are my own

**Signature & Date**

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**Bangladesh**

## Dedication

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*Dedicated to.....*

*..... My Honorable parents and Supervisor*

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## List of Acronyms

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<b>Abbreviation</b>	<b>Elaboration</b>
<b>BHPI</b>	Bangladesh Health Professions Institute
<b>CRP</b>	Centre for the Rehabilitation of the Paralyzed
<b>SLP</b>	Speech & Language Pathologist
<b>SLT</b>	Speech & Language therapy
<b>SPSS</b>	Statistical Package for the Social Sciences

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## **EXECUTIVE SUMMERY**

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Now a day, worldwide collaborative relationship among various professionals are increasing to prevent chronic disease. The significant collaborative relationship among the professionals has a great impact of patient outcome. So this study was meant to find out the professionals (ENT-specialists and Speech & Language Therapist) perceptions of collaborative relationships about laryngectomy rehabilitation. This study was conducted by using mix method research approach. Participants were selected by using purposive sampling. Data was collected by using semi structure self-inventory questionnaire. The result states from the research that many factors such participant educational background, year of professional experiences, patient referral relationship, level of understanding, level of willingness are influencing the collaborative relationship.

**1.1 Introduction**

Cancer is a diseases that can be located in any site of human body. Head and Neck region is one of them. Especially cancer of larynx is very commonest in head and neck region. (Hossain, Ali, Rahman, Huque, Alam, Islam & Ahmed, 2011). In 19<sup>th</sup> century, laryngeal carcinoma was a rare disease but its incidence increased dramatically in the 20<sup>th</sup> century. (Doyle & Keith, 2005). Worldwide incidence of laryngeal carcinoma is estimated in 157,000 new cases per year, and it is responsible for about 83,000 deaths annually. (Ferlay, Soerjomataram, Dikshit, Eser, Mathers, Rebelo, Parkin, Forman, & Bray, 2015). According to (Bjordal, Kaasa & Mastekaasa, 1994) Head and Neck cancer can be curable with a modern multimodal treatment. (Wieser, Mischo-Kelling, Vittadello, Cavada, Lochner, Fink, Naletto & Reeves, 2018) State that now a days, preventing and managing chronic diseases become a major challenging issue, but it can be overcome by ensuring the delivery of high quality, safe and effective care through an inter-professional collaboration (IPC). For that reasons, inter professional collaboration (IPC) is very important because (Zwarenstein, Goldman & Reeves, 2009) state that If there are problems in how healthcare professionals communicate and interact with each other, then problems in patient care can occur. So poor interprofessional collaboration (IPC) have negative effect on the delivery of health services and patient care. According to (Gates, Ryan & Lauder, 1982) The multidisciplinary laryngectomy rehabilitation management team should be assemble with otolaryngologist, speech pathologist, a lay-laryngectomee advisor, an audiologist, a psychologist, a social worker, a dietician, and a religious counselor. A successful voice restoration depends on a good collaboration among multidisciplinary team if they are committed to thorough assessment of each prospective patient, consistent management, and flexibility in problem solving. (Miller, 1990). As Speech and language therapist plays a critical role in laryngectomy rehabilitation management (Maghami & Ho, 2018). Laryngectomy rehabilitation is one of the areas where Speech & Language Therapist can work. As literature suggest that speech and language therapist have role in laryngectomy rehabilitation management team but there is no any available data in Bangladesh about their collaboration relationship with physician (ENT) about laryngectomy rehabilitation

management. So this study could be a valuable consideration for identifying collaborative relationships between Speech & Language Therapist and physician (ENT) about laryngectomy rehabilitation.

## **1.2 Significance of the Study**

Cancer is one of the major killer diseases in Bangladesh (Talukder et al., 2009). Especially cancer of larynx is very commonest in head and neck region (Hossain, Ali, Rahman, Huque, Alam, Islam & Ahmed, 2011). Laryngeal carcinoma accounts for about 83,000 deaths annually worldwide Ferlay, et al (2015). Despite its aggressiveness, laryngectomy is a treatment option with curative intent. Even if excision of larynx has been the standard procedure for advanced-stage laryngeal carcinoma. According to Miller, (1990) a successful voice restoration depends on a good collaboration among multidisciplinary team if they are committed to thorough assessment of each prospective patient, consistent management, and flexibility in problem solving. Various professional such as ENT-specialist, Speech and Language Therapist, Audiologist, Dietician can play a vital role in laryngectomy rehabilitation. Now a days, this kind of chronic diseases are increasing day by day. So that the collaboration relationship among various professional is needed to reduce the life altering effect. Lack of collaboration can have negative effect on patient's outcomes (Fewster-Thuente & Velsor-Friedrich, 2008).

The Study aim to find out the professionals (ENT-specialists and Speech & Language Therapist) perceptions of collaborative relationships about laryngectomy rehabilitation. Information about collaborative relationships of those professionals have a great importance to identifying inter- professional collaboration between Speech and Language Therapist and ENT-specialists in the consequences of Laryngeal rehabilitation in professional field. Many study about collaborative relationships among professionals was conducting in others country. But still now there is no study conducting about collaborative relationships between ENT-specialists and Speech & Language Therapist; even there is rarely practice occurs about collaborative relationships between ENT-specialists and Speech & Language Therapist in the field of laryngectomy rehabilitation in Bangladesh. So after completing the study the laryngectomy patients will be benefited because ENT

specialist would be aware about collaborative relationships and SLT services. The study would also provide a clear reflection of inter-professional collaboration (IPC) scenario between ENT-specialists and Speech & Language Therapist in the field of laryngectomy rehabilitation in Bangladesh.

To sum up, this study might create a working scope for SLT so it may form a future prospect of SLT profession in Bangladesh. This study would also provide data about the other professional (ENT-specialist) own role and responsibility to working with patients of laryngectomy. It is help to establish a collaborative treatment approach for laryngectomy rehabilitation with ENT-specialists and help to improve the referral system to SLT services in Bangladesh.

### **1.3 Operational Definitions**

**Key Words:** Perceptions, Collaborative relationships, Laryngectomy rehabilitation, Speech and Language therapist, Physician (ENT).

#### **1.3.1 Perceptions**

In this study, perception word use as a knowledge or an interpretation of a collaborative relationship between two professionals about Laryngectomy rehabilitation.

#### **1.3.2 Collaborative relationships**

In this study, Collaborative relationships used to describes the clinical practice collaboration where two or more health professionals working together. Here ENT-specialists and Speech & Language Therapist collaborative relationship are discussed.

#### **1.3.3 Laryngectomy rehabilitation**

Laryngectomy is the surgical removal of the larynx. The larynx is the portion of your throat that houses your vocal cords, which allow you to produce sound. Rehabilitation means the action of restoring someone health or normal life through training and therapy after imprisonment, addiction, or illness. When we consider the larynx restoring by health program after the surgery its called Laryngectomy rehabilitation. In this study, laryngectomy rehabilitation describes as larynx restoration program after larynx surgery.

#### **1.3.4 Speech and language therapist**

Speech & language therapist are health professional who have completed the Dhaka university undergraduate program on B.S c in Speech & language therapy and currently working as a clinical Speech & language therapist.

#### **1.3.5 ENT- specialist**

ENT- specialist is a subspecialty within conditions of the ear, nose, and throat (ENT) and related structures of the head and neck. In this study, ENT- specialist are health professional who are working with laryngectomy patients.

#### **1.4 Research Question**

What is the perceptions of collaborative relationships between Speech & Language Therapist and ENT- specialist about laryngectomy rehabilitation?

#### **1.5 General and specific objectives of the Study**

##### **1.5.1 General Objective**

- To find out Perceptions of collaborative relationships about laryngectomy rehabilitation.

##### **1.5.2 Specific Objectives**

- To determine the demographic characteristics of the study population.
- To explore the current practice of speech and language therapist and ENT-specialist about Laryngectomy rehabilitation management team.
- To identify the influencing factor of inter-professional collaboration of laryngectomy rehabilitation between speech and language therapist and ENT-specialist.

## 1.6 Literature Review

According to (Jarrell, Carabasi and Radomski, 2000). Cancer is a group of diseases caused by unregulated growth and spread of neoplastic cells. Bangladesh is a developing country with the highest population density worldwide. The current population of Bangladesh is 153.6 million with the growth rate of 1.37% (Hussain and Sullivan, 2013). Like many other countries in the world, cancer is one of the major killer diseases in Bangladesh (Talukder et al., 2009). The five most common cancers in Bangladesh are gynecological (cervix uteri, corpus uteri and ovary), head and neck (lip and oral cavity, nasopharynx, other pharynx, larynx and thyroid), lung, breast and esophagus (Hasan, Uddin, Rfiqzaman, Chowdhury and Wahed, 2012). Head and neck cancers especially cancers of the larynx is an issue that affects the daily lives of patients with severe consequences. Choice of treatment depends on stage at diagnosis; organ sparing surgery such as partial laryngectomy is performed in early stages and total laryngectomy in advanced cases. (Akil ,Yollu ,Toprak and Ayril , 2017) Patients with head and neck cancer not only have to deal with the impact of a life-threatening disease, but also with the effect of treatment on physical, psychological, and social functioning. So it is important to take a multidisciplinary treatment to reduce their overall impact of a life-threatening factor. Sometime multidisciplinary treatment taking can be challenging issue due to professional collaboration relationship. In the present paper, the collaboration relationship about laryngectomy rehabilitations among the various professionals is investigated. It is hypothesized that the collaboration relationship among the health professional is vary due to influencing factor. The following literature review attempt to demonstrate and support this hypothesis.

In research article studies found, Interdisciplinary collaboration has the capacity to affect both healthcare providers and patients. Research has shown that the lack of communication and collaboration may be responsible for as much as 70% of the adverse events currently reported. (Thuente and Friedrich, 2008)

The next research article shows by Wieser et al, (2018). In this article presents quantitative findings from a mixed method study that aimed to explore the status of interprofessional collaboration (IPC) in a Health Trust, located in a trilingual region in Northern Italy. The survey targeted seven health professions (physicians, nurses,

dieticians, occupational therapists, physiotherapists, speech therapists, and psychologists). The survey was distributed online to more than 5,000 health professionals and completed by 2,238. Researcher found that not all professions had an opportunity to collaborate with others and also suggest that the way health care is organized impacted on perceptions of collaboration between the health's professionals. This study provides an initial insight into the perceived Levels of IPC within a North Italian context.

According to (Benoit and Rammage, 2009) study, we found that Laryngectomized individuals living in British Columbia were surveyed to determine experiences with tracheoesophageal prosthesis (TEP) crises. In the study, information provided by patients and front-line health care professionals indicated a need for further education and training of those who may provide front-line services to laryngectomized individuals, specifically TEP crisis management. The results of study is more than half of the laryngectomized respondents expressed concern about not being able to access the help they require during a TEP crisis and also fundamental elements of an education program for front-line health professionals are described. So the above literature shown that the collaboration relationship among the various professional could be key of a successful rehabilitation.

### **2.1 Study design**

In this study investigator aims to find out the perception of collaborative relationships between speech & language therapist and ENT-specialist about laryngectomy rehabilitation. To answer the study research questions, the researchers used a mixed methods approach (Tashakkori and Teddlie, 2003), which is a procedure for collecting, analyzing and mixing or integrating both quantitative and qualitative data at some stage of the research process within a single study (Creswell, 2005). The rationale for mixing both types of data is that neither quantitative nor qualitative methods are sufficient by themselves to capture the trends and details of situations. When used in combination, quantitative and qualitative methods complement each other and provide a more complete picture of the research problem (Green; Johnson and Turner, 2003; Tashakkori and Teddlie, 1998).

This study used a sequential explanatory mixed methods design, consisting of two distinct phases (Creswell, Plano Clark, Guttman, and Hanson, 2003; Tashakkori and Teddlie, 1998).

In quantitative phase , investigator used cross-sectional study design to conduct the study because it is one of the most commonly used survey research design (Shaughnessy, Zechmeister and Zechmeister, 2003). Investigator used this design because it generally describes a group at one point of time (Bailey, 1997). In this study the cross sectional survey provides information about larger population from a smaller number of samples (Bailey, 1997). There was another reason for choosing the cross-sectional survey because cross-sectional survey is less expensive (Depoy and Gitlin, 1998). On the other hand (stein and Cutler, 2000) & (Frankel and Wallen, 2000) said that the main function of the survey research is to obtain precise objective descriptions from a specific universe of people or entities by face to face interview about a particular topic or issue.

In qualitative phase, researcher used phenomenological qualitative research design to know about the professional's perception about their collaborative relationship on laryngectomy rehabilitation. According to Hicks (1999), Qualitative research is an exploratory in nature by which can gain insight into another person's view, opinions, feelings, and beliefs within their own natural setting .So it was suggested that mixed methods approach was the most applicable method to conduct the study, so that investigator was used mixed methods research approach.

## **2.2 Sample selection**

### **2.2.1 Study place**

This study was conducted in specialized Hospital in Dhaka city such as East west medical and hospital, Bangladesh ENT hospital Ltd, Aichi Medical College and Hospital, National Institute of Ear, Nose and Throat (ENT), Centre for the Rehabilitation of the Paralyzed (CRP) and others.

### **2.2.2 Study population**

In this study population were the ENT-specialist and Speech and Language Therapist. Only these population groups was selected as investigators aim is to find out their perception of collaboration relationship about laryngectomy rehabilitation working area in Bangladesh.

### **2.2.3 Sampling procedure**

Investigator used purposive sampling method to conduct the study. It is a judgmental sampling process where individuals are selected purposely based on the study (Depoy & Gitlin, 1999). In this type of sampling, items for the sample are selected deliberately by the researcher; his choice concerning the items remains supreme (Kothari, 2004).

According to Hicks (2000), purposive sampling is an easy way of accessing a sample from a population. Investigator was very concern to avoid the sample selection bias through ensuring predefined inclusion and exclusion criteria.

### 2.2.4 Sample size

A sample is a group of subjects that was selected from the population, who are used in pieces of research (Hicks, 2000). Though a larger sample is more likely to be representative of the population in a survey study, but in many situations, it is not possible for the researcher both for practical and financial reasons (Hicks, 2000). So the investigator was used a sampling equation to determine the sample size. The equation is according to sample size –

Where,

**n**= required sample size,

**t** = confidence level at 95% (standard value of 1.96)

**p**= Prevalence of subject

**q**= (1-p)

**d**= Precision level (.05)

$$n = \frac{Z^2 PQ}{d^2}$$
$$= \frac{(1.96)^2 \times (0.32) \times (1-0.32)}{(0.05)^2} = 384.16$$

Purposive sampling, items for the sample are selected deliberately by the researcher; his choice concerning the items remains supreme (Kothari, 2004). It is unrealistic to study on 384 samples within 3 months due to time and monetary resources. So the investigator will gather 20 participants through purposive sampling, where form 4 are selected for qualitative interview. Depoy & Gitlin (1998) suggested that, a large sample is not always the best policy and is often inessential.

### 2.2.5 Inclusion criteria

- Both male and female participants.
- Only ENT- specialist who treated laryngectomy patients are included
- Only Clinical Speech and language therapist are included.
- Professional who were willing to participate.

### **2.2.6 Exclusion criteria**

- Intern Speech and language therapist are not eligible.
- Subjects who were unwilling to participant in this study were excluded.
- ENT- specialist who are not treated laryngectomy patients.

## **2.3 Data collection**

### **2.3.1 Data collection Tools**

A semi structure questionnaire was mainly used to collect the data (Please see Appendix 1 and 2 for the questionnaire). Questions were developed according to study aim and objectives. Semi structured questionnaire were used for interviews to collect relevant information from the participants.

#### **2.3.1.1 Data collection Procedure**

Investigator collected data from the participants through face to face interview. Investigator clarified that the participant had the right to refuse to answer of question during completing questionnaire. Investigator clarified to all participants about the aim of the study. Participants was ensured that any personal information will not be published anywhere. Investigator took permission from each volunteer participant by using a written consent form.

#### **2.3.1.2 Field test**

The investigator had accomplished the field test with two participants before starting the collection of data. The investigator had informed the participant about the aim and objectives of the study during the interview session. It was important to carry out a field test before collecting the final data because it helped the investigator to refine the data collection plan.

## **2.4 Data analysis**

Investigator used descriptive statistics for quantitative data analysis. Because descriptive statistics are commonly used to make sense of survey data (Hicks, 2000). Bailey (1997) suggested that Descriptive statistics are those that describe, organize, and summarize data. Investigator used this technique because the aim of the study is to identify the perceptions of collaborative relationships between Speech & Language Therapist (SLT) and physician (ENT) about laryngectomy rehabilitation. A computer program-“Statistical Package for the Social Sciences, version-22 (SPSS22)” was used as a data analysis tool. In another study of Johansson and Kerstin (2013), here all statistical analysis was performed in Excel and in SPSS. The variables were labeled in a list and the investigator established a computer-based data definition record file that consists of a list of variables of order. The investigator put the name of the variables in the variable view of SPSS and defined the types, values, decimal, label alignment and measurement level of data. The next step was cleaning new data files to check the inputted data set to ensure that all data had been accurately transcribed from the questionnaire sheet to the SPSS data view. Then the raw data was ready for analysis in SPSS. Data was analyzed by descriptive statistics and calculated as percentages and presented by using a table, bar graph, and pie charts. At last, the result of this survey consisted of quantitative data and investigator showed the result easily through descriptive statistics. Investigator also used content analysis for qualitative data. Content analysis was used to uncover themes for the study and is a common data analysis procedure most often used in qualitative research and is based on searching for repeated words, phrases or concepts (Bailey, 1997). Before content analysis took place English translations were made from the Bangla transcriptions and checked. Further checked for reliability and any bias data was organized according to interview questions by two external reviewers. The next stage involved identifying information units. Information units were categorized into themes in relation to the participant’s perception about challenging behavior and their knowledge of behavior management strategies. In the second stage of data analysis, data was coded into broad categories as dictated by the research question. Then each categories separately coded into a themes and each commence of the participants” were included in categories. Finally analyzing of the interview data by categorizing and themes researcher completed the data analysis.

## **2.5 Ethical consideration**

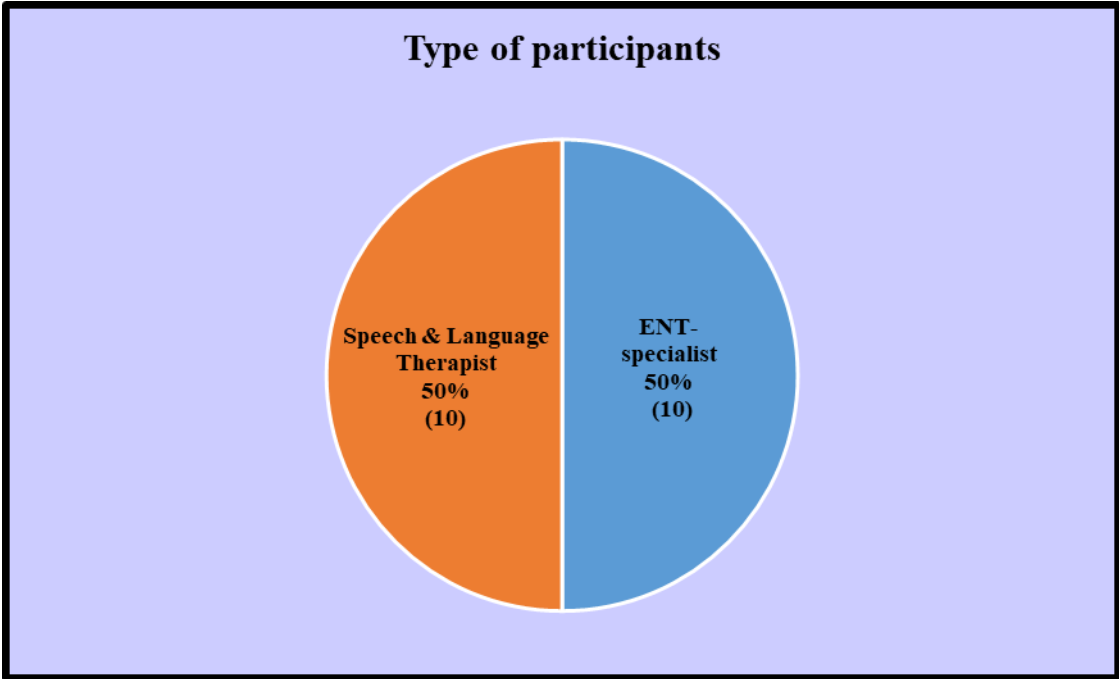
Voluntary participation from the participants was considered. Participants provided a written consent form. The investigator was collected written permission to conduct the research from the participants. Participants were informed verbally about the aims and objective of the study and investigator role as well. Participants also assured that the study would have no harm to the participants physically or mentally because it was a survey study and was not involve any experiments. Confidentiality was maintained by the investigator b keeping the name, address and the personal information of the client and as data was not shared with others expect the supervisor of the investigator. Participants were also being informed that they had full rights to withdraw themselves or refuse to answer any question any time during study.

In order to conduct the study the investigator collected the demographic information to interpret the data that included in the findings. The main objective of this study was to find out the participants perception of inter-professional collaboration (IPC) about laryngectomy rehabilitation management.

**Quantitative Phase**

**3.1 Demographics information of the participants**

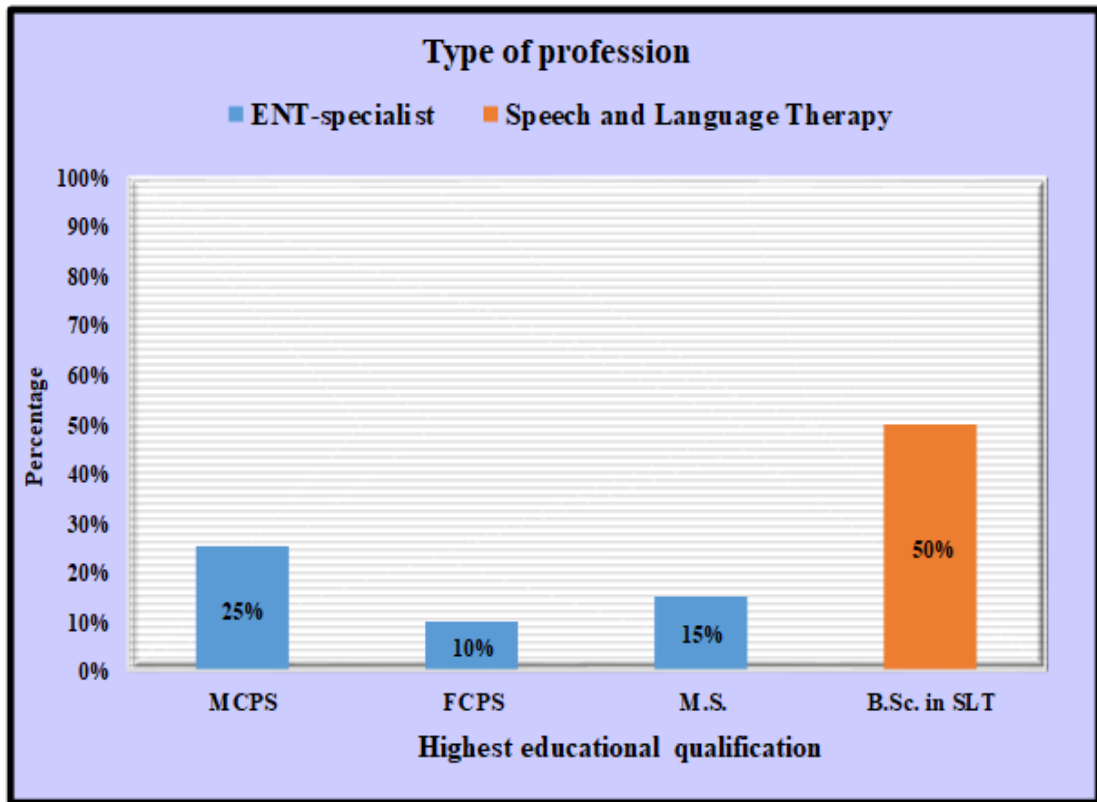
**3.1.1 Type of participants**



**Figure-1: Type of participants**

The pie chart shows that total number of participants. Among 100% (20) participants the numbers of ENT-specialist participants were 50% (10) and Speech & Language Therapist participants were 50% (10).

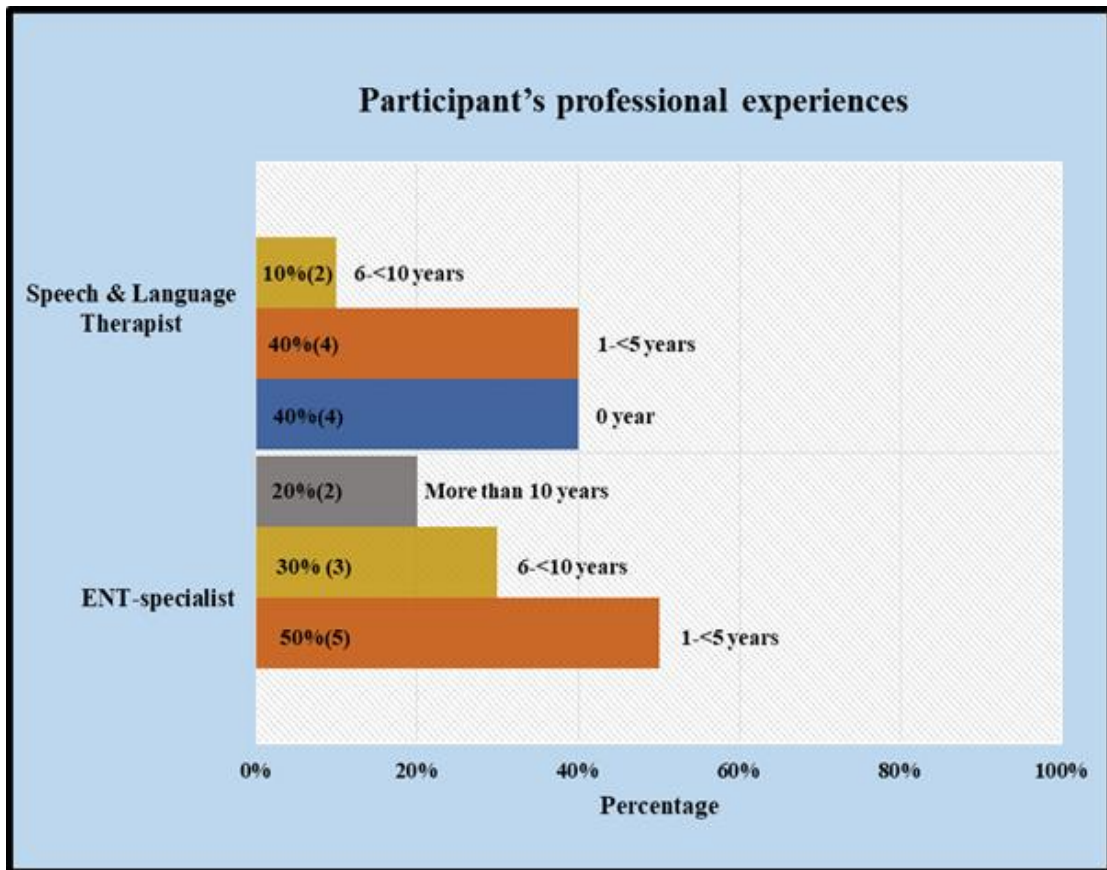
### 3.1.2 Highest educational qualification level according to participant's profession



**Figure-2: Highest educational qualification level of participant**

The bar graph shows that the half numbers of participants 50% (n=10) were completed B.Sc. in SLT degree. Among the participants 25% (n=5) participants were completed MCPS level, 15% (n=3) were completed M.S. and last 10% (n=2) of participants highest educational qualification level were FCPS

### 3.1.3 Participant's professional experiences about laryngectomy rehabilitation



**Figure-3: Participant's professional experiences**

The bar graph shown that there are two group of participant, one is speech & Language Therapists (n=10) and another is ENT- specialist (n=10). From the bar graph among speech & Language Therapists participants, less than half 40% (4) participants had 0 year of experience , others approximately half 40.% (4) participants had 1-<5 years of experience and the last 10% (2) of participants had 6-<10 years of experience in laryngectomy rehabilitation management. In the case of ENT-specialist participants, among half 50% (5) had 1-<5 years of experience, others 30% (3) had 6-<10 years of experiences and the last 20% (2) of participants had more than 10 years of experience in laryngectomy rehabilitation management.

### 3.2 ENT-specialist perception of collaborative relationship about laryngectomy rehabilitation.

#### 3.2.1 ENT-specialist Knowledge about speech and language therapy profession in Bangladesh.



**Figure-4: Knowledge about speech and language therapy profession**

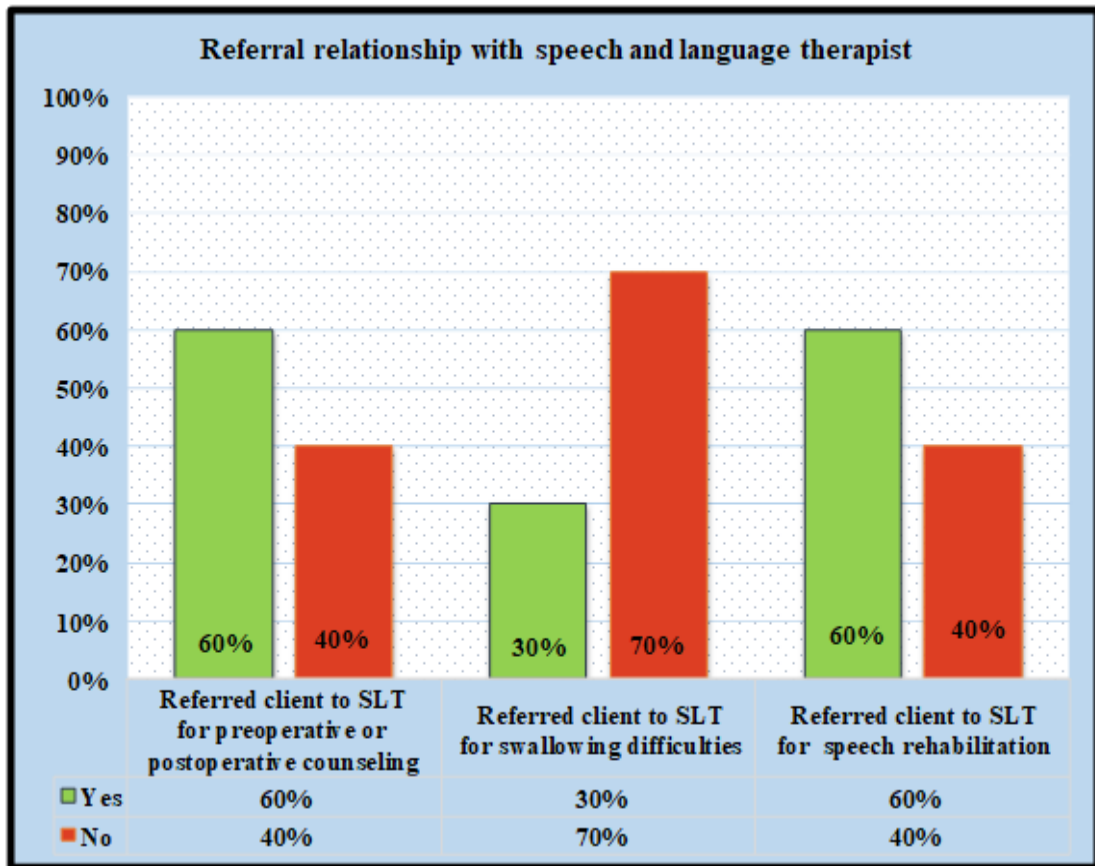
The pie chart shows that the ENT-specialist participants, Among 80% of participants had knowledge about Speech & Language Therapy profession and others 20% of participants had no knowledge about Speech & Language Therapy profession in Bangladesh.

**3.2.2 Table- 1: Knowledge about the specific role of speech & language therapist in laryngectomy rehabilitation management as per ENT-specialist.**

<b>Type of role</b>	<b>Participants response (Yes)</b>
<b>Preoperative counseling</b>	100%
<b>Postoperative counseling</b>	90%
<b>Speech rehabilitation</b>	100%
<b>Swallowing difficulties</b>	80%
<b>Voice training</b>	100%
<b>Prosthesis fitting and management</b>	50%
<b>Overall communication functions</b>	90%

Form the Table-1, Majority of ENT-specialist participants agree with the 100% role a speech and language therapist have in preoperative counseling, speech rehabilitation and voice training. In the case of postoperative counseling and overall communication functions, ENT-specialist participants agree with the 90% role a speech and language therapist have in treatment approach. Form ENT-specialist point of view, voice training, 80% and Prosthesis fitting and management, 50% role a speech and language therapist have in laryngectomy rehabilitation treatment approach.

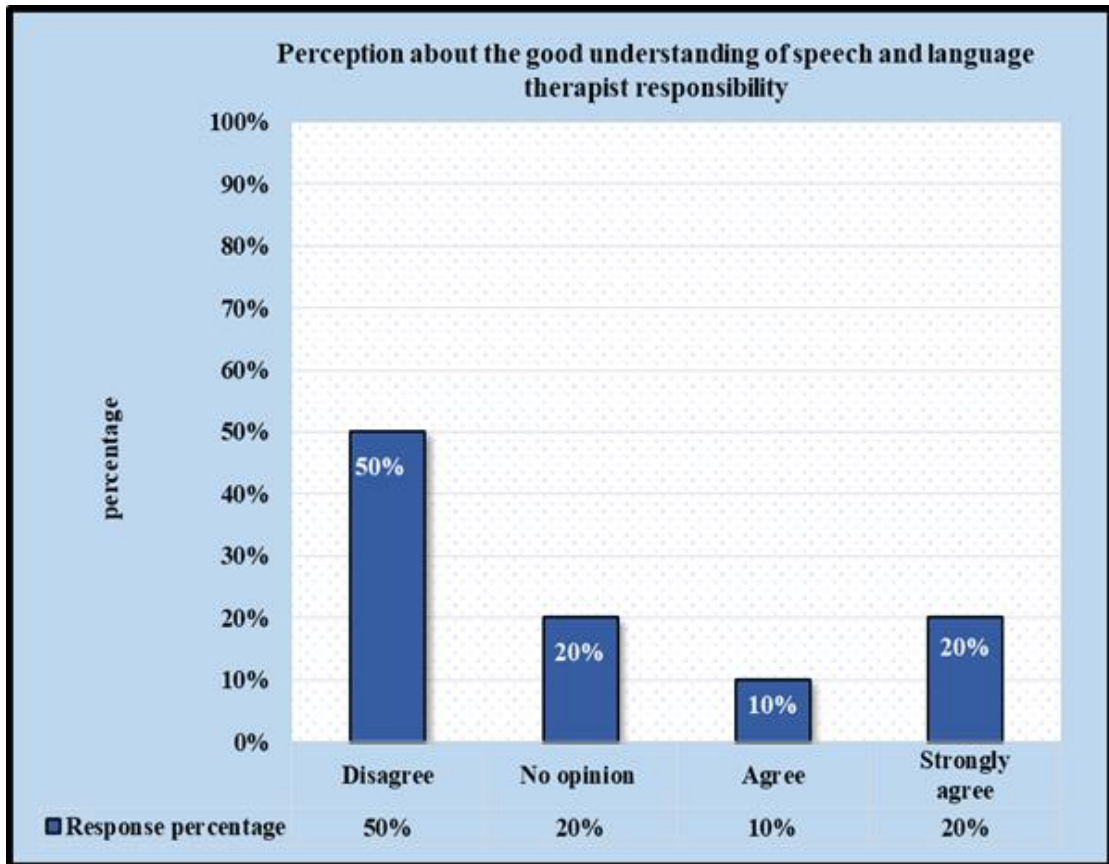
### 3.2.3 ENT-specialist perception about Referral relationship with speech and language therapist.



**Figure-5: Referral relationship with speech and language therapist**

The graph shows, majority of the participants (60%) respond that they referred their client to speech and language therapist for Speech rehabilitation and Preoperative or postoperative counseling. Others (40%) participants said that they did not referred their client to speech and language therapist for Speech rehabilitation and Preoperative or postoperative counseling. In case of swallowing difficulties, many of the participants (30%) answered that they usually referred their client to speech and language therapist and others most of the participants (70%) respond that they did not referred their client to speech and language therapist for swallowing difficulties.

**3.2.4 ENT-specialist perception about the good understanding with speech and language therapist in their responsibility in the case of laryngectomy rehabilitation management.**



**Figure-6: Level of Perception about the good understanding of speech and language therapist responsibility**

The figure shows that the 50% of ENT-specialist participant's responds disagree, others 20% of ENT-specialist participant's responds give no opinion whereas 10% of ENT-specialist participant's responds agree and last 20% of ENT-specialist participant's responds strongly agree about the good understanding with speech and language therapist responsibility in the case of laryngectomy rehabilitation management.

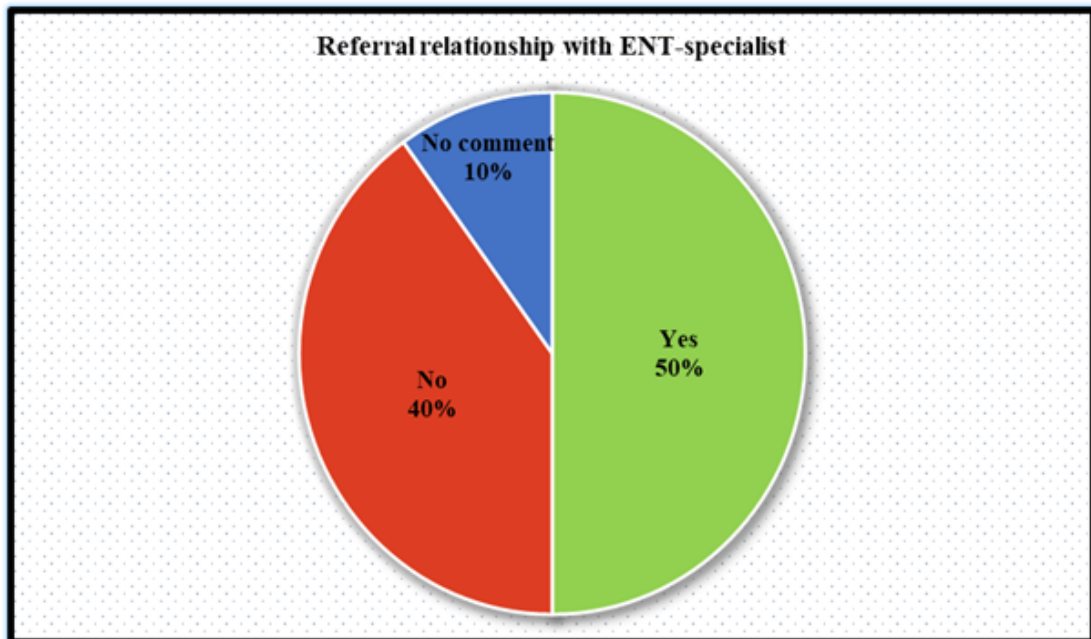
### 3.3. Speech and language therapist perception of collaborative relationship about laryngectomy rehabilitation.

3.3.1 table-2: Knowledge about their specific role in the field of laryngectomy rehabilitation management

Type of role	Participants response (Yes)
Preoperative counseling	70%
Postoperative counseling	90%
Speech rehabilitation	100%
Swallowing difficulties	90%
Voice training	90%
Prosthesis fitting and management	50%
Overall communication functions	90%

Form the table 2, Majority of participants agree with the 100% role they have in speech rehabilitation. In the case of postoperative counseling, swallowing difficulties, voice training and overall communication functions, speech and language therapy participants agree with the 90% role they have in treatment approach. In case of Prosthesis fitting and management, 50% role they have in laryngectomy rehabilitation treatment approach.

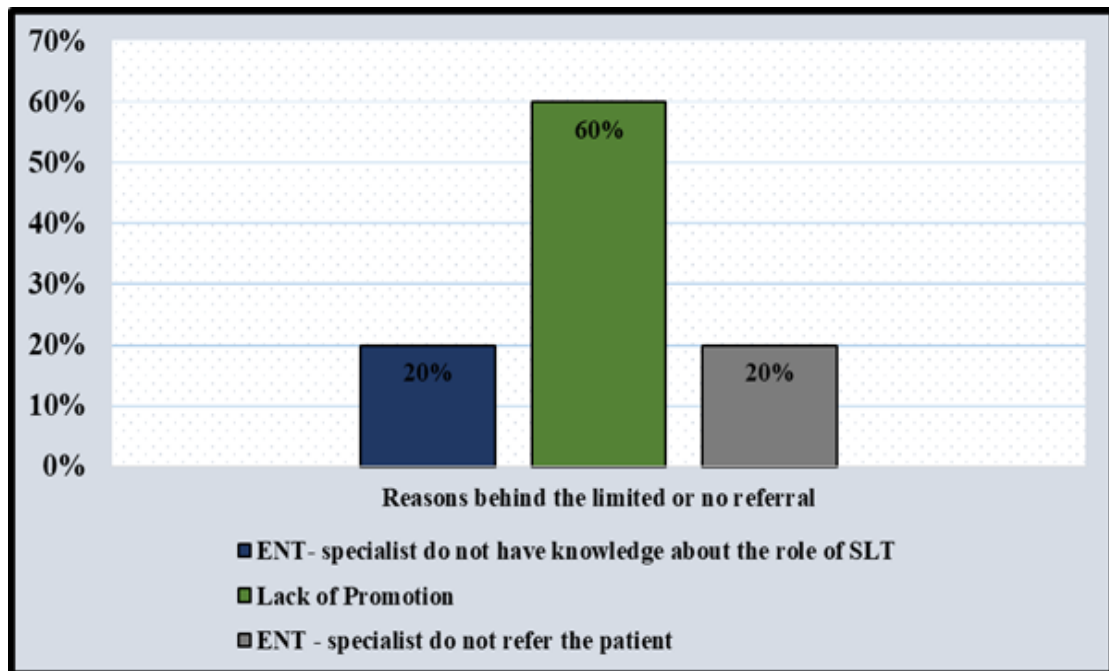
### 3.3.2 Speech and language therapist perception about referral relationship with ENT-specialist



**Figure-7: Referral relationship with ENT-specialist**

The pie chart shows that speech & language therapy participants, among 50% of participants said that they treated laryngectomee's referred by ENT-specialist and others 40% of participants answered that they did not treated laryngectomee's referred by ENT-specialist. The last 10% of participants had no comment on that issue.

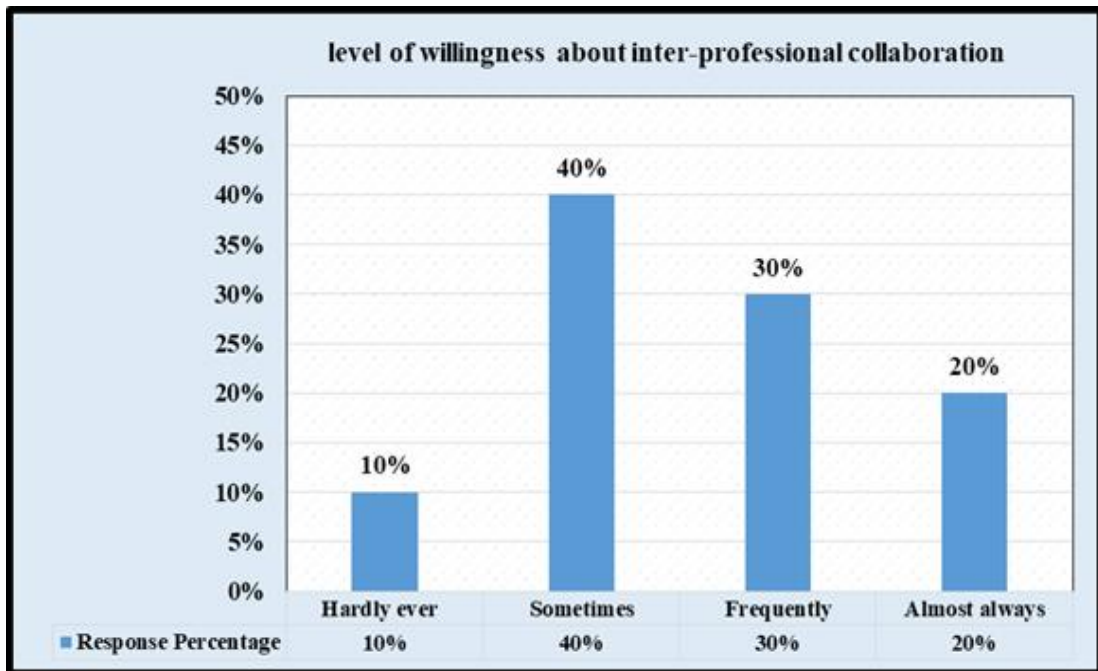
### 3.3.3 Speech and language therapist perception about the reasons behind the limited or no referral



**Figure-8 Reasons behind the limited or no referral**

From the bar graph among speech & language therapy participants, more than half 60% participants answered that ENT- specialist do not have knowledge about the role of SLT, whereas 20% responds said that lack of promotion and the last 20% of participants think that ENT - specialist do not refer the patient to speech & language therapist.

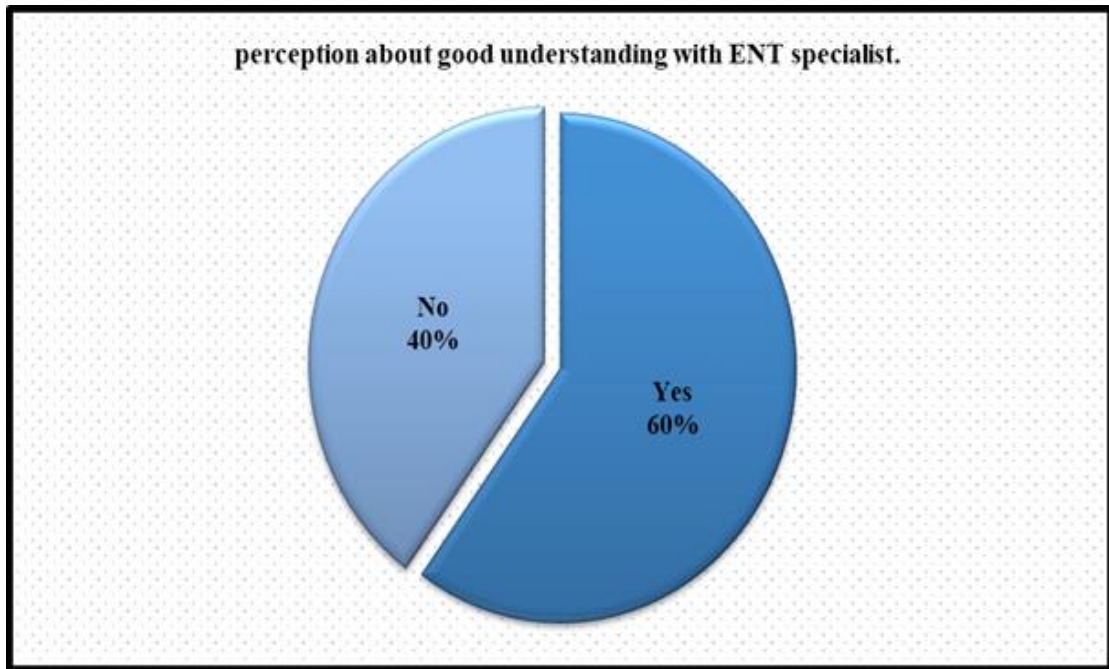
**3.3.4 Speech and language therapist perception about ENT-specialist level of willingness about collaborative relationship.**



**Figure- 9: level of willingness about inter-professional collaboration**

The figure shows that the 40% of participant's responds that the ENT-specialist is sometimes willing to work with speech & language therapist whereas 30% responds frequently willing to work. Other 20% of participant's responds that the ENT-specialist is almost always.

### 3.3.5 Speech and language therapist perception about good understanding with ENT specialist.



**Figure-10: Level of Perception about the good understanding with ENT specialist.**

The pie chart shows that the Speech and language therapist participants, among 60% of participants had good understanding with ENT specialist, whereas 40% of participants had no good understanding with ENT specialist.

## Qualitative Phase

### 3.4 Thematic finding

**Theme-1:** Professional perception about current working situation in laryngectomy rehabilitation management.

**Category 1:** Professional perception about the role of speech and language therapist in laryngectomy rehabilitation management.

**Table-3:** Professional perception about the role of speech and language therapist in laryngectomy rehabilitation management.

Code	Resp. ENT-1	Resp. ENT-2	Resp. SLT-1	Resp. SLT-2
SLT works on the speech rehabilitation of laryngectomy patient	√	√	√	√
SLT works for problems in swallowing in laryngectomy patients	√	√	√	√
SLT works for problems in voice in laryngectomy patients	√	√	√	√
SLT works on preoperative or postoperative counseling for laryngectomy patients.			√	
SLT works on overall communication functions for laryngectomy patients	√	√	√	√

ENT= Ear, Nose, Throat specialist, SLT= Speech and Language Therapist

On the above results we can see that the respondent professionals (ENT-1, ENT-2, and SLT-2) had the similar perception about the role of speech and language therapist in laryngectomy rehabilitation management. They stated that they found laryngectomy patients had speech, voice, swallowing and overall communication difficulties. Ear Nose and Throat specialist (ENT-2) stated that “Some time laryngectomy patients’ needs voice training, that time they need speech and language therapist”. Respondent

Professionals (SLT-1) also stated that they have a role in preoperative or postoperative counseling for laryngectomy patients. Speech and Language Therapist (SLT-1) stated that “Patients with laryngectomy needs counseling before or after surgery because of their partial or permanent loss of voice, without counseling patient need more time to adopt with their after surgery condition”

**Category 2:** Professional perception about the laryngectomy patient’s referral to speech and language therapist.

**Table-4:** Professional perception about the laryngectomy patient’s referral to speech and language therapist.

<b>Code</b>	<b>Resp. ENT-1</b>	<b>Resp. ENT-2</b>	<b>Resp. SLT-1</b>	<b>Resp. SLT-2</b>
Referred to SLT for their speech , voice and swallowing problems		√	√	√
Referred to SLT but there were no SLT in ENT hospital so the patient did not get service	√			
Many ENT professional have no idea about the SLT profession is exist in Bangladesh.		√		√

This category concern with referral system most of professional’s (ENT-2, SLT-1, SLT-2) said they referred laryngectomy patients for their speech, voice, and swallowing difficulties; But respondent professional (ENT-1) also said they referred to SLT but there were no SLT in ENT hospital so the patient did not get service. Ear, Nose and Throat specialist (ENT-1) stated that “I did not see any SLT in ENT hospital, so how could I refer laryngectomy patients to SLT”. One the other hands, respondent professionals (ENT-2, SLT-2) said they found that many ENT professional have no idea about the SLT profession is exist in Bangladesh. Ear, Nose and Throat specialist (ENT-2) stated that “I found that, many of my ENT specialist colleague have no idea about the SLT profession is exist in Bangladesh”

**Theme-2:** Professional perception SLT should work in ENT hospital because laryngectomy patients may have speech, voice and swallowing or others difficulties.

**Category 3:** Professional opinion about the role of speech and language therapy service in ENT hospital.

**Table-5:** Professional opinion about the role of speech and language therapy service in ENT hospital.

<b>Code</b>	<b>Resp. ENT-1</b>	<b>Resp. ENT-2</b>	<b>Resp. SLT-1</b>	<b>Resp. SLT-2</b>
SLT are always welcome in ENT hospital	√	√		
There is inadequate number of SLT work in ENT hospital.	√		√	√
SLT department should arrange the presentation and conference to explore the role.	√		√	√
SLT should sit with organizational managing director for ensure SLT service in ENT hospital.		√		

Most of the respondent professional's (ENT-1, SLT-1, SLT-2) said that there is inadequate number of SLT work in ENT hospital. They also stated that SLT department should arrange the presentation and conference to explore the role. Speech and Language Therapist (SLT-1) stated that "We should explore our professional role in a various sector. SLT department can use various promotion to create position in different area". Respondent professional (ENT-2) stated that speech and language therapist should sit with organizational managing director for ensure SLT service in ENT hospital. He mention that "speech and language therapist and their society should set meeting with the organizational managing director for make sure speech and language therapy service in ENT hospital as much as possible hospital"

**Quantitative Phase**

In this study, 20 participants were selected who was working for treatment patients with laryngectomy. Among 100% (20) participants the numbers of ENT-specialist participants were 50% (10) and Speech & Language Therapist participants were 50% (10) (figure-1). Here investigators took two professionals perception because investigator wants to explore collaborative relationship about laryngectomy rehabilitation, the current practice of speech and language therapist and ENT-specialist about Laryngectomy rehabilitation management and to identify the influencing factor of inter-professional collaboration of laryngectomy rehabilitation between speech and language therapist and ENT- specialist. Many others study such as Krogstad, Hofoss, & Hjortdahl, (2004) also took doctor and nurse perception to explore inter-professional co-operation. On another study Wieser, Mischo-Kelling, Vittadello, Cavada, Lochner, Fink & Reeves, (2018) took seven health professions perception (physicians, nurses, dieticians, occupational therapists, physiotherapists, speech therapists, and psychologists) to explore inter-professional collaboration (IPC).

Professional licensure education is an important factor to establish collaborative relationship among the various professional. To obtain successful collaborative relationship for any treatment option, at first need to ensure inter-professional education. According to Oandasan & Reeves, (2005) main two key elements needed for inter-professional education (IPE) is the pre and post licensure education. In this study, investigator took professionals who have licensure educational background (Figure-2). According to Reeves, Perrier, Goldman, Freeth & Zwarenstein, (2013) found there study that inter-professional education (IPE) offers a possible way to improve inter-professional collaboration and patient care. Most of the case speech and language therapist depends on various course to gain proper knowledge for treatment. However, the focus of Fouche and colleagues (2014) study was on core competencies

required for working in chronic care rather than on inter-professional collaboration (IPC)

In this study, investigator also use year of professional experiences to discuss results. Investigator found a major finding to explore the current practice of speech and language therapist and ENT- specialist about laryngectomy rehabilitation management team. One unexpected finding was that 40% of speech & language therapist's participants had no year of experience in laryngectomy rehabilitation management (Figure-3). Investigator assumed that the limited working opportunity is reasons for no year of experience in laryngectomy rehabilitation management was found. It seems possible that these results were due to the fact that all ENT and SLT professional in Bangladesh are not included in the study. According to Bruce, Letourneau, Ritchie, Larocque, Dennis & Elliott, (2002) study investigator found that researcher was trying establish significant relation between year of professional experience and professional perception of family center care (FCC).

In case of laryngectomy rehabilitation management, investigator found that ENT-specialist give the first sight of treatment according to professional hierarch then they referred client allied professionals as per patient needs. But from figure-4, 20% of ENT- specialist participants had no knowledge about speech & language therapy profession in Bangladesh. So this result seem to reflect the poor inter-professional collaborative relationship about laryngectomy rehabilitation in Bangladesh. Knowing the others professional role and responsibility is also a part of inter-professional collaboration skill. Similar patterns have been reported Nair et al. (2012) stated that knowledge is limited regarding the frequency of nurse-physicians collaborative behaviours currently utilized in acute care hospital settings.

Other variable which is responsible for inter-professional collaboration that is referral relationship. According to Gaboury, Bujold, Boon, & Moher, (2009) study investigator found that the processes of collaboration affecting by patient referral relationship. From figure-5, 40% of ENT-specialist participants said that they did not referred client for speech rehabilitation. Whereas, 70 % of ENT-specialist participants said that they did not referred client for swallowing difficulties. On the other hands,

less than half 40% of speech and language therapist participants answered that they did not treated laryngectomee's referred by ENT-specialist (Figure-7).Regarding these results ,investigator assumed that the inadequate referral relationship is a result of both professional unwillingness collaborative behavior . As speech and language therapist are not a first sight of treatment professional in laryngectomy rehabilitation management, so speech and language therapist have many more thing to do to establish inter-professional collaboration. As per study finding, professional promotion is a key element to reduce collaboration gap. In Gaboury, et al (2009) study investigator also found there study that the implicit hierarchical rapport either affects complementary and alternative medicine (CAM) practitioners differently based on their professions. If we noticed carefully that collaborative relationship about laryngectomy rehabilitation, speech & language therapist mostly depends more on the referral. Investigator in this study also try to found the speech & language therapist perception about the reasons behind the limited or no referral. Here more than half of participants thinks that ENT- specialist do not have knowledge about the role of SLT and the minimum participants thinks that ENT - specialist do not refer the patient to speech & language therapist or their lack professional promotion (Figure-8).

In this study, table-1 describes the ENT-specialist Knowledge about the specific role of speech & language therapist in laryngectomy rehabilitation management and the table -2, describes speech and language therapist Knowledge about their specific role in the field of laryngectomy rehabilitation management. Investigator belief that clear Knowledge about the specific role of others professional can drive an effective professional collaboration.According to Pellatt, (2005). Professionals need to consider a greater understanding of the nature of role of other professional that might be a helpful for team work, and also suggest that In order to collaborate in an effective manner, specific role expectations and professional contributions of each team member must be clearly delineated.

Many others factor that are influencing the collaborative relationship about laryngectomy rehabilitation management, understanding others professional responsibility is one of them. Investigator believe that inter-professional collaboration (IPC) achieved when each professionals have clear understanding about others professional responsibility. In this study, half of ENT-specialist participant's did not

have well understanding others professional respective responsibility (Figure-6) whereas 40% of speech and language therapist participants had no good understanding with ENT specialist. (Figure-10)

Professional's level of willingness can affect inter-professional collaboration (IPC). In MacDonald., Bally, Ferguson., Murray., Fowler-Kerry, & Anonson (2010) study investigator found that the most comprehensive and effective client care, team members must develop and maintain a willingness to utilize the knowledge and skills of the inter-professional team members. In this study, 40% of speech and language participant's responds that the ENT-specialist is sometimes willing to work with speech & language therapist. So good understanding and willingness is an important factor to change collaboration relationship.

The sum of the result indicated that levels of collaboration between two professional was describes in a generally positive manner with some inevitable variable such participant educational background, year of professional experiences, patient referral relationship, level of understanding, level of willingness are influencing the collaborative relationship.

### **Qualitative Phase**

Discussion are according to the themes are provided below.

**Theme-1:** Professional perception about current working situation in laryngectomy rehabilitation management.

Form the results of the study it appears that the majority of the respondent professionals in the study were able to provide perception about the role of speech and language therapist in laryngectomy rehabilitation management. Their majority statement are agree with the role of SLT in laryngectomy rehabilitation for speech, voice and swallowing problem. But only 1 respondent professional are agree with other role such as preoperative or postoperative counseling. Investigator belief that clear Knowledge about the specific role of others professional can drive an effective professional collaboration. According to Pellatt, (2005). Professionals need to consider a greater understanding of the nature of role of other professional that might be a helpful for team work, and also suggest that In order to collaborate in an

effective manner, specific role expectations and professional contributions of each team member must be clearly delineated.

In this study, under the theme 1, Category 2 stated that professional perception about the laryngectomy patient's referral to speech and language therapist. Within 4 participant 3 of the participant said that they referred laryngectomy patients for their speech, voice, and swallowing difficulties; But 1 respondent professional also said they referred to SLT but there were no SLT in ENT hospital so the patient did not get service. One the other hands, 2 respondent professionals out of 4 professionals said that they found that many ENT professional have no idea about the SLT profession is exist in Bangladesh (table-4). According to Gaboury, Bujold, Boon, & Moher, (2009) study investigator found that the processes of collaboration affecting by patient referral relationship. In Gaboury, et al (2009) study investigator also found there study that the implicit hierarchical rapport either affects complementary and alternative medicine (CAM) practitioners differently based on their professions. If we noticed carefully that collaborative relationship about laryngectomy rehabilitation, speech & language therapist mostly depends more on the referral. In qualitative finding , investigator found most important issue that many ENT professional have no idea about the SLT profession is exist in Bangladesh and some stated that there were no SLT in ENT hospital so referred to speech & language therapist are limited or no referral are happened.

**Theme-2:** Professional perception SLT should work in ENT hospital because laryngectomy patients may have speech, voice and swallowing or others difficulties.

On the second theme, majority number of the respondent professional's said that there is inadequate number of SLT work in ENT hospital and they also stated that SLT department should arrange the presentation and conference to explore the role. (Table-5). Investigator also found from the respondent professional that is as speech and language therapy is very new in Bangladesh perspective for that's why SLT department should arrange presentation, seminar, conference and meeting with others health professionals and organizational managing director for ensure the SLT service in ENT hospital to explore the role as investigator said SLT is a new profession in Bangladesh perspective. According to Crytal (2002) the most common setting that SLTs are work in school, hospital and clinics. Investigator belief that exploring the

role of SLT in various field such as ENT hospital is very important for collaborative purpose in the case of laryngectomy rehabilitation. Although allied health professionals are already well established in the developed world. Some studies reveal that there is still a lack of knowledge between team members. But other studies show the importance of research in helping health professionals to gain insight into each other expertise. Speech and Language Therapy is comparatively new profession in Bangladesh so evidence of practicing in laryngectomy rehabilitation at ENT hospital has not been revealed yet. So these studies have revealed to this research lots of factor that are influencing the collaborative practice between SLT and ENT specialist in laryngectomy rehabilitation management. As Bangladesh is a developing country there is a great need for establish the role speech therapy in laryngectomy rehabilitation management at ENT-hospital.

This study will help Speech and Language therapy service providers to collaboration practice for the patient with laryngectomy.

- This study can be implicated facilities in CRP, where treatment of laryngectomy rehabilitation can be provided for the patient with laryngectomy.
- In future, this study will influence the policymakers to make policy to refer the patients with laryngectomy to SLTs for treatment.

### **6.1 Limitation**

There were some situational limitations and barriers while considering the results of the study in different aspects. Those are as follows:

- The investigator only questioned a small number of subjects (20 in total) that was very small to generalize the result.
- This study Speech & Language Therapist data was collected at CRP. So the data cannot be generalized to the practice of documentation by all Speech & Language Therapist in Bangladesh.
- It is only the research ever in this of practice Speech & Language Therapist in Bangladesh, so local resources about documentation were not available for comparison.
- A purposive sampling was used that was not reflective of the wider population under study.
- Time and resources were limited that have a great deal of impact of the study.

## **6.2 Recommendation**

This is the first primary study on professional collaborative relationship about laryngectomy rehabilitation in Bangladesh. So there were some limitations and barriers during conducting the study. These are-

- The study was done within a short period of time and only 20 participants were selected to conduct the whole study. It was a small number of participant's .So the external validity of the study decreased and further study can be conducted with a wide range and large participant size.
- Purposive sampling was used to select participants and study place. So further study can be conducted by simple random sampling.

The major findings of this study were based on the factor that are influencing the collaborative relationship of professional about laryngectomy rehabilitation. In this study investigator identified that the collaboration relationship between speech & language therapist and ENT-specialist. The significant collaborative relationship among the professionals has a great impact of patient outcome. The result states from the research that many factors such participant educational background, year of professional experiences, patient referral relationship, level of understanding, level of willingness are influencing the collaborative relationship. Thus a successful health care depends on collaborative relationship but it can be vary by many factors.



- American Psychological Association Referencing system (APA). (6<sup>th</sup> edn.). (2015). Retrieved from [https://blackboard.swan.ac.uk/bbcwebav/institution/Library/ISS\\_Resources/Referencing%20Guides/Full%20APA20referencing%20guide.pdf](https://blackboard.swan.ac.uk/bbcwebav/institution/Library/ISS_Resources/Referencing%20Guides/Full%20APA20referencing%20guide.pdf)
- Akil.f,Yollu.U,Toprak,S.P,Ayral,M,(2017), Laryngectomy: what is the impact of the type Of surgery on life quality and sexual function, ACTA OTORHINOLARYNGOLOGICA ITALICA, ;3,:276-280
- Bailey, D.M. (Ed.). (1997). *Research for the Health Professional: a practical guide* (2<sup>nd</sup> ed.). Davis Company: USA.
- Bjordal, K., Kaasa, S., & Mastekaasa, A. (1994). Quality of life in patients treated for head and neck cancer: a follow-up study 7 to 11 years after radiotherapy. *International Journal of Radiation Oncology\* Biology\* Physics*, 28(4), 847-856.
- Creswell, J. W. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative approaches to research*, (2nd Ed.), Merrill/Pearson Education, Upper Saddle River, NJ
- Creswell, J. W., Plano Clark, V. L., Gutmann, M., and Hanson, W. (2003). Advanced mixed methods research designs. In: Tashakkori, A., and Teddlie, C. (eds.), *Handbook on mixed methods in the behavioral and social sciences.*, Sage Publications, Thousand Oaks, CA, pp. 209–240.
- Crystal, D (2002),*Introduction to Language Pathology*, Whorr Publisher Ltd, England

- Bruce, B., Letourneau, N., Ritchie, J., Larocque, S., Dennis, C., & Elliott, M. R. (2002). A multisite study of health professionals' perceptions and practices of family-centered care. *Journal of family nursing*, 8(4), 408-429.
- Doyle, P. C., & Keith, R. L. (Eds.). (2005). *Contemporary considerations in the treatment and rehabilitation of head and neck cancer: Voice, speech, and swallowing*. Austin, Texas: Pro Ed
- Depoy, E., & Gitlin, L.N. (1998). *Introduction to Research: Understanding and Applying Multiple Strategies (2nd ed.)*. London: Moshby publishe
- Ferlay, J., Soerjomataram, I., Dikshit, R., Eser, S., Mathers, C., Rebelo, M., Parkin, D, M., Forman, D., & Bray, F. (2015). Cancer incidence and mortality worldwide: sources, methods and major patterns in GLOBOCAN 2012. *International journal of cancer*, 136(5), E359-E386
- Fewster-Thuente, L., & Velsor-Friedrich, B. (2008). Interdisciplinary collaboration for healthcare professionals. *Nursing administration quarterly*, 32(1), 40-48.
- Frankel, J., & Wallen, N., (2000). *How to Design and Evaluate Research in Education*. USA: McGraw-Hill.
- Gaboury, I., Bujold, M., Boon, H., & Moher, D. (2009). Interprofessional collaboration within Canadian integrative healthcare clinics: Key components. *Social Science & Medicine*, 69(5), 707-715.
- Gates, G. A., Ryan, W., & Lauder, E. (1982). Current status of laryngectomy rehabilitation: IV. Attitudes about laryngectomy rehabilitation should change. *American journal of otolaryngology*, 3(2), 97-103.

- Hasan, N., Uddin, M. M., Rfiqzzaman, M., Chowdhury, S. S., & Wahed, T. B. (2012). Distribution of types of cancer and patterns of cancer treatment among the patients at various hospitals in Dhaka division, Bangladesh. *International Research Journal of Pharmacy*, 3 (3), 219-222. Retrieved from <http://www.irjponline.com>
- Hicks, M. C. (Ed.). (2000). *Research Methods for Clinical Therapist(3rd ed.)*. London: Churchill Livingstone.
- Hossain, M. A., Ali, M. I., Rahman, M., Huque, S. N., Alam, M. M., Islam, M. A., & Ahmed, S. U. (2011). Study on topographical distribution of carcinoma larynx. *Bangladesh Journal of Otorhinolaryngology*, 17(2), 96-103.
- Hussain, S. A., & Sullivan, R. (2013). Cancer control in Bangladesh. *Japanese Journal of Clinical Oncology*, 43(12), 1159–1169. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3842101/pdf/hyt140.pdf>
- Jarrell, B. E., Carabasi, R.A., & Radmoski, J. S. (2000). *Surgery* (4th ed.). USA: Lippincott Williams & Wilkins.
- Johnson, B., and Turner, L. A. (2003). Data collection strategies in mixed methods research. In: Tashakkori, A., and Teddlie, C. (eds.), *Handbook on mixed methods in the behavioral and social sciences.*, Sage Publications, Thousand Oaks, CA, pp. 297–320.
- Kothari, C.R. (2004). *Research methodology: methods & techniques* (2<sup>nd</sup> ed.). New Delhi: New Age International Publisher.
- MacDonald, M. B., Bally, J. M., Ferguson, L. M., Murray, B. L., Fowler-Kerry, S. E., & Anonson, J. M. (2010). Knowledge of the professional role of others: A key interprofessional competency. *Nurse education in practice*, 10(4), 238-242

- Maghami, E., & Ho, A. S. (Eds.). (2018). *Multidisciplinary Care of the Head and Neck Cancer Patient* (Vol. 174). Springer.
- Mosters-Benoit, M., & Rammage, L. (2009). A Study of the Knowledge of Health Care Providers Regarding Laryngectomy Care. *Canadian Journal of Speech-Language Pathology & Audiology*, 33(4).
- Miller, S. (1990). The role of the speech-language pathologist in voice restoration after total laryngectomy. *CA: a cancer journal for clinicians*, 40(3), 174-182.
- Nair, D. M., Fitzpatrick, J. J., McNulty, R., Click, E. R., & Glembocki, M. M. (2012). Frequency of nurse-physician collaborative behaviors in an acute care hospital. *Journal of interprofessional care*, 26(2), 115-120.
- Oandasan, I., & Reeves, S. (2005). Key elements for interprofessional education. Part 1: The learner, the educator and the learning context. *Journal of Interprofessional care*, 19(sup1), 21-38.
- Reeves, S., Perrier, L., Goldman, J., Freeth, D., & Zwarenstein, M. (2013). Interprofessional education: effects on professional practice and healthcare outcomes (update). *Cochrane Database Syst Rev*, 3(3).
- Shaughnessy, J. J., Zechmeister, E. B., & Zechmeister, J. S. (2003). *Research methods in psychology* (6 th ed.). USA: McGraw- Hill.

- Stein, F. & Cutler, S. (Eds.). (2000). *Clinical Research in Occupational Therapy* (4<sup>th</sup> Ed.). Singular Publishing Group: California.
- Talukder, M. H., Jabeen, S., Islam, M. J., Karim, N., Shaheen, S., Mamun, A. A., Alam, S., Baki, M. O., & Zaman M. (2009). *Cancer Registry Report of the NICRH, 2005-2007*. Retrieved from <http://www.ban.searo.who.int/LinkFiles>
- Tashakkori, A., and Teddlie, C. (1998). Mixed methodology: Combining qualitative and quantitative approaches. *Applied Social Research Methods Series*, 46, Sage Publications, Thousand Oaks, CA.
- Tashakkori, A. and Teddlie, C., (Eds.) (2003). *Handbook on mixed methods in the behavioral and social sciences*, Sage Publications, Thousand Oaks, CA.
- Topaloglu.I,Steltark.Z,Atar.Y,Berkiten.G,Buyukkoc.O and Cakir.O.2014.Evaluation of voice quality after supraglottic laryngectomy.Otolorynhology head and neck surgery.151(6),1003- 1007 DOI:10.1177/0194599814554763.
- Thuente,L.F,Friedrich,B.V,(2008),Interdisciplinary collaboration for health care professionals,wolters Kluwer health,32(1),40-48
- Wieser, H., Mischo-Kelling, M., Vittadello, F., Cavada, L., Lochner, L., Fink, V.,Naletto, C., & Reeves, S. (2018). Perceptions of collaborative relationships between seven different health care professions in Northern Italy. *Journal of interprofessional care*, 1-10
- Zwarenstein, M., Goldman, J., & Reeves, S. (2009). Interprofessional collaboration: effects of practice-based interventions on professional practice and healthcare outcomes. *Cochrane Database Syst Rev*, 3(3), CD000072.

## Appendix-1

<b>Basic &amp; Demographic Information</b>			
SN	Questions	Possible answers Category	Given answer Code
1.1	Gender	1= Male 2= Female	<input type="checkbox"/>
1.2	Type of profession	1=Speech & Language Therapist (SLT) 2= ENT- specialist	<input type="checkbox"/>
1.3	Highest degree received	1= MCPS 2= FCPS 3= MS 4= MD 5= M.Phil. 6= Ph.D. 7= BS.C in SLT 8= Others: <b>Write your opinion here.....</b>	<input type="checkbox"/>
1.4	Years of professional experiences about laryngectomy rehabilitation	1= 0 years 2= 1 - <5 years 3= 6- <10 years 4= More than 10 years 5= 10+ years	<input type="checkbox"/>
1.5	Current working institute	1= DMCH 2= NICRH 3= NIENT 4= AMCH 5= CRP 7= Others: <b>Write your opinion here.....</b>	<input type="checkbox"/>

**Self-Inventory (Semi Structured) Questionnaire**

Questions	Possible answers Category	Given answer Code									
<b>Are you familiar with Speech and Language Therapy (SLT) profession in Bangladesh?</b>	1=Yes 2=No	<input type="checkbox"/>									
<b>Do you think Speech and Language Therapist (SLT) have role in laryngectomy rehabilitation?</b>	1=Yes 2=No 3= No comment	<input type="checkbox"/>									
<b>From your point of view, What kind of role a Speech and Language Therapist (SLT) can play in laryngectomy rehabilitation?</b>	1= Preoperative counseling 2= Postoperative counseling 3= Speech rehabilitation 4= Swallowing difficulties 5=Voice training 6= Prosthesis fitting and management 7= Overall communication functions 8= Above all 9= No role	<table border="1" data-bbox="1142 792 1358 983"> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> </table> <p>Multiple Answerer is accepted</p>									

<b>Why do you think that the Speech and Language Therapists (SLT) have no role in laryngectomy rehabilitation?</b>	1=I don't know the SLT role in laryngectomy rehabilitation 2= SLT does not have adequate knowledge. 3= This section only for ENT specialist 4= Others professionals have role except SLT 5= No comment 6=Others: write your opinion here.....	<input type="checkbox"/>
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<p><b>Have you ever referred your client to speech and language therapist (SLT) for preoperative or postoperative counseling about communication and swallowing?</b></p>	<p>1=Yes 2=No 3= No comment</p>	<p><input type="checkbox"/></p>
<p><b>Have you referred your client to Speech and Language Therapist (SLT) for Swallowing difficulties?</b></p>	<p>1=Yes 2=No 3= No comment</p>	<p><input type="checkbox"/></p>
<p><b>What type of speech rehabilitation methods usually you recommend to laryngectomy patient?</b></p>	<p>1=Electro larynx 2=Esophageal speech 3=Tracheo-esophageal puncture (TEP) 4= Nonverbal Communication</p>	<p><input type="checkbox"/> <input type="checkbox"/>  <input type="checkbox"/> <input type="checkbox"/></p>
<p><b>Have you referred such patients to Speech and Language Therapist (SLT) for speech rehabilitation?</b></p>	<p>1=Yes 2=No 3= No comment</p>	<p><input type="checkbox"/></p>
<p><b>Did you write a referral note to Speech and Language Therapist (SLT)?</b></p>	<p>1=Yes 2=No 3= No comment</p>	<p><input type="checkbox"/></p>
<p><b>To what extent the laryngectomy patients might be benefited by speech and language therapy service?</b></p>	<p>0=Not Benefited 1=Poorly Benefited 2= Average Benefited 3= More than Average Benefited 4= Highly Benefited</p>	<p><input type="checkbox"/></p>

<p><b>Do you think Speech and Language Therapists can play an important role in multidisciplinary team (MDT) approach of laryngectomy rehabilitation management team?</b></p>	<p><b>0=Strongly Disagree</b>  <b>1=Disagree</b>  <b>2= No opinion or uncertain</b>  <b>3= Agree</b>  <b>4= Strongly Agree</b></p>	<p><input type="checkbox"/></p>
<p><b>ENT- specialist have a good understanding with Speech and Language Therapist (SLT) about our respective responsibilities.</b></p>	<p>0=Strongly Disagree  1=Disagree  2= No opinion or uncertain  3= Agree  4= Strongly Agree</p>	<p><input type="checkbox"/></p>
<p><b>Do you think ENT- specialist can contribute to recommended speech and language therapy service to the patients?</b></p>	<p>0=Strongly Disagree  1=Disagree  2= No opinion or uncertain  3= Agree  4= Strongly Agree</p>	<p><input type="checkbox"/></p>

Section B: Completet this section if you are a Speech and Language Therapist (SLT)

<p><b>How many years have you been practicing Speech &amp; Language Therapy (SLT)?</b></p>	<p>1= 1 year                  2= 2 years                  3= 3 years                  4= 4 years                  5= 5 years                  6= More than 5 years</p>	<p style="text-align: center;"><input type="checkbox"/></p>									
<p><b>Do you think Speech and Language Therapist (SLT) have a role in laryngectomy rehabilitation?</b></p>	<p>1=Yes                  2=No                  3= No comment</p>	<p style="text-align: center;"><input type="checkbox"/></p>									
<p><b>As a Speech and Language Therapist, what is your role in laryngectomy rehabilitation?</b></p>	<p>1= Preoperative counseling                  2= Postoperative counseling                  3= Speech rehabilitation                  4= Swallowing difficulties                  5=Voice training                  6= Prosthesis fitting and management                  7= Overall communication functions                  8= Above all                  9= No role</p>	<table border="1" style="width: 100%; height: 100%;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table>									

<p><b>Have you treated such patients referred by ENT-specialist for SLT services?</b></p>	<p><b>1=Yes</b>  <b>2=No</b>  <b>3= No comment</b></p>	<p><input type="checkbox"/></p>
<p><b>Did ENT- specialist sent the patient with a referral note?</b></p>	<p>1=Yes  2=No  3= No comment</p>	<p><input type="checkbox"/></p>
<p><b>From your point of view, What are the reasons behind the limited or no referral?</b></p>	<p>1= ENT- specialist do not have knowledge about the role of SLT.  2= ENT - specialist think SLT have no adequate knowledge.  3= Lack of Promotion.  4= ENT - specialist do not refer the patient.  5=Others: <b>write your opinion here.....</b>  .....</p>	<p><input type="checkbox"/></p>
<p><b>Do you think Speech and Language Therapists and ENT- specialist can play an important role in multidisciplinary team approach of laryngectomy rehabilitation management team?</b></p>	<p><b>0=Strongly Disagree</b>  <b>1=Disagree</b>  <b>2= No opinion or uncertain</b>  <b>3= Agree</b>  <b>4= Strongly Agree</b></p>	<p><input type="checkbox"/></p>
<p><b>I feel competent in my ability to give appropriate treatment for laryngectomy patient.</b></p>	<p>0=Strongly Disagree  1=Disagree  2= No opinion or uncertain  3= Agree  4= Strongly Agree</p>	<p><input type="checkbox"/></p>

<p><b>Why do you feel incompetent to give appropriate treatment for laryngectomy patient?</b></p>	<p><b>1= I don't have adequate knowledge.</b></p> <p><b>2= I didn't find it at my study curriculum.</b></p> <p><b>3=Need more Professional Training</b></p> <p><b>4=Others: write your opinion here.....</b></p> <p>.</p>	<p><input type="checkbox"/></p>
<p><b>Do you have a good understanding with ENT-specialist about our respective responsibilities?</b></p>	<p>1=Yes</p> <p>2=No</p> <p>3= No comment</p>	<p><input type="checkbox"/></p>
<p><b>From your point of view, To what extend the ENT-specialist are willing to work with Speech and Language Therapist (SLT)?</b></p>	<p>0=None</p> <p>1= Hardly ever</p> <p>2= Sometimes</p> <p>3= Frequently</p> <p>4= Almost always</p>	<p><input type="checkbox"/></p>
<p><b>Do you think Speech and Language Therapist (SLT) can contribute to recommended speech and language therapy service to ENT-specialist?</b></p>	<p>0=Strongly Disagree</p> <p>1=Disagree</p> <p>2= No opinion or uncertain</p> <p>3= Agree</p> <p>4= Strongly Agree</p>	<p><input type="checkbox"/></p>

## **Appendix-2**

### **Question for ENT specialists**

1. From your point of view, what kind of role a Speech and Language Therapist (SLT) can play in laryngectomy rehabilitation? Please describe in detail.
2. Do you work together with SLT in the case of laryngectomy rehabilitation? If you not, than describe the reasons behind this? Please describe in detail.
3. How do you work together with SLT in the case of laryngectomy rehabilitation? Please describe your advice in detail.

### **Question for Speech and language therapist**

1. From your point of view, to what extend the ENT-specialist are willing to work with Speech and Language Therapist (SLT)?
2. Have you treated laryngectomy patients referred by ENT–specialist for SLT services? If not or you treated very few patients, so what are the reasons behind the limited or no referral? Please describe in detail from your point of view,
3. How do you work together with ENT- specialist in the case of laryngectomy rehabilitation? Please describe your advice in detail.

## Appendix-3



### বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই) BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)

(The Academic Institute of CRP)

CRP-Chapain, Savar, Dhaka. Tel: 7745464-5, 7741404, Fax: 7745069  
BHPI-Mirpur Campus, Plot-A/5, Block-A, Section-14, Mirpur, Dhaka-1206. Tel: 8020178, 8053662-3, Fax: 8053661

সিআরপি-বিএইচপিআই/০১/১৯/৬৯

তারিখ : ০১.০১.২০১৯

প্রতি  
বিভাগীয় প্রধান  
স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপি বিভাগ,  
সিআরপি, সাভার, ঢাকা।

বিষয় : রিসার্চ প্রজেক্ট এর জন্য আপনার প্রতিষ্ঠান সফর ও তথ্য সংগ্রহ প্রসঙ্গে।

জনাব,  
আপনার সদয় অবগতির জন্য জানাচ্ছি যে, পক্ষাঘাতগ্রস্তদের পুনর্বাসন কেন্দ্রে-সিআরপি'র শিক্ষা প্রতিষ্ঠান বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই) ঢাকা বিশ্ববিদ্যালয় অনুমোদিত বিএসসি ইন স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপি কোর্স পরিচালনা করে আসছে।  
উক্ত কোর্সের ছাত্রছাত্রীদের কোর্স কারিকুলামের অংশ হিসাবে বিভিন্ন বিষয়ের উপর রিসার্চ ও কোর্সওয়ার্ক করা বাধ্যতামূলক।

বিএইচপিআই'র ৪র্থ বর্ষ বিএসসি ইন স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপি কোর্সের ছাত্র মোঃ আল হাসিব তার রিসার্চ সংক্রান্ত কাজের তথ্য সংগ্রহের জন্য আগামী ০৫.০১.২০১৯ তারিখ থেকে ৩০.০১.২০১৯ তারিখ পর্যন্ত আপনার প্রতিষ্ঠানে সফর করতে অগ্রহী। তার রিসার্চ শিরোনামঃ

“Perceptions of collaborative relationships about Laryngeotomy Rehabilitation: A Study between speech and Language Therapist and Physician (ENT).”

তাই তাকে আপনার প্রতিষ্ঠান সফর এবং প্রয়োজনীয় তথ্য প্রদান সহ সার্বিক সহযোগিতা প্রদানের জন্য অনুরোধ করছি।

ধন্যবাদান্তে

মোঃ সাজ্জাদ হোসেন  
বিভাগীয় প্রধান  
এসএলটি, বিএইচপিআই।



Permission given with thanks.

11/19

UASNAT



বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)  
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তারিখ : ০১.০১.২০১৯

প্রতি  
পরিচালক  
ইস্ট ওয়েস্ট মেডিকেল কলেজ এন্ড হাসপাতাল।  
হরিরামপুর, ঢাকা - ১৭১১।

বিষয় : রিসার্চ প্রজেক্ট এর জন্য আপনার প্রতিষ্ঠান সফর ও তথ্য সংগ্রহ প্রসঙ্গে।

জনাব,

আপনার সদয় অবগতির জন্য জানাচ্ছি যে, পক্ষাঘাতগ্রস্তদের পুনর্বাসন কেন্দ্রে-সিআরপি'র শিক্ষা প্রতিষ্ঠান বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই) ঢাকা বিশ্ববিদ্যালয় অনুমোদিত বিএসসি ইন স্পীচ এন্ড ল্যান্ডুয়েজ থেরাপি কোর্স পরিচালনা করে আসছে।

উক্ত কোর্সের ছাত্রছাত্রীদের কোর্স কারিকুলামের অংশ হিসাবে বিভিন্ন বিষয়ের উপর রিসার্চ ও কোর্সওয়ার্ক করা বাধ্যতামূলক।

বিএইচপিআই'র ৪র্থ বর্ষ বিএসসি ইন স্পীচ এন্ড ল্যান্ডুয়েজ থেরাপি কোর্সের ছাত্র মোঃ আল হাসিব তার রিসার্চ সংক্রান্ত কাজের তথ্য সংগ্রহের জন্য আগামী ০৫.০১.২০১৯ তারিখ থেকে ৩০.০১.২০১৯ তারিখ পর্যন্ত আপনার প্রতিষ্ঠানে সফর করতে আগ্রহী। তার রিসার্চ শিরোনামঃ

“Perceptions of collaborative relationships about Laryngeectomy Rehabilitation: A Study between speech and Language Therapist and Physician (ENT).”

তাই তাকে আপনার প্রতিষ্ঠান সফর এবং প্রয়োজনীয় তথ্য প্রদান সহ সার্বিক সহযোগিতা প্রদানের জন্য অনুরোধ করছি।

ধন্যবাদান্তে

মোঃ সাজ্জাদ হোসেন

বিভাগীয় প্রধান

এসএলটি, বিএইচপিআই।



To  
ENT  
Department  
Head,  
Please help him,  
make  
5/1/19

MD. Abdul Hie  
B.Sc. MBA, MPH, HRM (PGD)  
Deputy Director  
East West Medical College & Hospital



বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)  
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“Perceptions of collaborative relationships about Laryngeectomy Rehabilitation: A Study between speech and Language Therapist and Physician (ENT).”

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ধন্যবাদান্তে

মোঃ সাজ্জাদ হোসেন  
বিভাগীয় প্রধান  
এসএলটি, বিএইচপিআই।



accepted  
marked  
1.0

Abdul Hie  
MPH, HRM (PGD)  
Director  
College & Hospital

## Appendix-4

### Consent form

The investigator is Md. Al Hasib a 4th year student of B. Sc. in Speech and Language Therapy (SLT) department in Bangladesh Health Profession Institute (BHPI). This study is part of course curriculum. In this study participant has clearly been informed the purpose of the study as to find out the **perceptions of collaboration relationships about laryngectomy rehabilitation between ENT-specialist and Speech & Language Therapist (SLT).**

In this study I am

.....

a participant or sample and I have been clearly informed about the purpose of the study. I am willingly participating in this study. I will have the right to withdraw from this study at any stage and I am not bounded to answer to anyone to get me out of the study at any time. This study will not cause any benefit or impact on participant work at present and future.

I have been also inform that, investigator will keep all information confidential and personal identity such as participant's name & address will not be published anywhere of the study. The researcher will be available to answer any study related question to participant. I have been informed about the above- mentioned information and I agree to participate willingly giving my consent.

Signature of the study Participant:

Signature of the Researcher: