



COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES

DEPARTMENT OF SPECIAL NEEDS AND INCLUSIVE EDUCATION

Knowledge, Attitude and Practice Among Health Care Providers Working at Yekatit 12 Hospital Towards Speech Therapy Services Given at The Unit

By:

Rahel Yohannes/BSC/

JULY 2024

ADDIS ABABA, ETHIOPIA

**Knowledge, Attitude and Practice Among Health Care
Providers Working at Yekatit 12 Hospital Towards
Speech Therapy Services Given at The Unit**

By:

Rahel Yohannes/BSC/

**A Thesis submitted to Addis Ababa University's College of
Education and Behavioural Studies, Department of Special Needs
and Inclusive Education, in partial fulfilment of the requirements
for the degree of Master of Science in Speech and Language
Therapy**

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Board of Examiners for Approval

Advisors

Dr. Belay Hagos (PhD, Associate Professor of Education)

_____	_____
Signature	Date

Dr. Getaw Alamne (MD+, Plastic and Reconstructive Surgeon)

_____	_____
Signature	Date

External Examiner

Dr. Seblewongel Asmare (MD+, Neurologist)

_____	_____
Signature	Date

Internal Examiner

Dr. Daniel Desta (PhD)

_____	_____
Signature	Date

DECLARATION

I, the undersigned, affirm that the thesis titled " Knowledge, Attitude and Practice Among Health Care Providers Working at Yekatit 12 Hospital Towards Speech Therapy Services Given at The Unit" is my original work. All the sources of information used in its preparation have been duly acknowledged.

Name: Rahel Yohannes

Signature _____

Date _____

Name: Dr.Belay Hagos (PhD/Associate Professor of Education)

Signature _____

Date _____

Name: Dr. Getaw Alamne(MD+, Plastic and Reconstructive Surgeon)

Signature _____

Date _____

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ABSTRACT

Background: Collaboration and referrals between various medical specialties are crucial for comprehensively addressing patient needs. Speech-language pathologists (SLPs) evaluate and provide treatment for difficulties related to speech, language, and feeding. The limited awareness of the scope of speech-language therapy often leads to delayed management for these cases.

Objective: To evaluate the present state of knowledge, attitude & practice among healthcare providers at Yekatit 12 Hospital regarding speech therapy services and to identify areas for improvement to enhance accessibility of speech therapy care at the unit from May 1-15, 2024.

Methodology: Hospital based cross sectional mixed study was conducted among 264 healthcare providers of Yekatit 12 Hospital in Addis Ababa, Ethiopia. Total period for Study was from May 1, 2024 to May 15, 2024. Simple random sampling was used to select participants for study, who are working in the departments of the hospital. Data were collected through a face to face interviewer using semi-structured adopted questionnaire, by printed paper and was analyzed by SPSS software version 25. Descriptive statistics were used to measure strength of association with appropriate AOR and interpreted at 95% CI. Bi-variable analysis was done and then variables with $P < 0.2$ were chosen for multivariable and then multivariable logistic regression was done to identify factors associated with practice of referral. For qualitative data, it was summarized from probing questions stepwise.

Results:- A total of 264 healthcare providers taking part with 98.1% response rate. Having knowledge of speech therapy service availability with AOR= 6.061 (95% CI = 3.091-11.886), the case being cleft lip and palate AOR= 2.98(95% CI =(1.39-6.4), staying updated on SLP services AOR=5.242 (95%CI= 2.652-10.361) and favorable attitude, AOR = 2.13 (95%CI = (1.87-3.79) were significantly associated with provider's better practice status of referral to SLPs, while being not trained on SLP services AOR = 0.364 (95% CI= 0.13-0.94), long waiting lists of patients AOR= 0.47 (95%CI = 0.25-0.60) & having less frequent collaboration with SLPs AOR = 0.167 (95% CI = 0.061-0.460), were significantly associated with health care providers low practice of referral status to SLPs.

Conclusion and Recommendation: Overall knowledge & attitude scores were 59.5% & 78.2% respectively with only 36% practiced referral. Health care providers should practice collaboration with SLP in patient care & Yekatit 12 hospital should monitor all departments for routine referral process to speech therapy services.

Keywords: knowledge, attitude, practice, healthcare providers, speech-language pathologists, speech therapy services, Yekatit 12 Hospital

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ACRONYMS AND ABBREVIATIONS

SLP	Speech and Language Pathology
SLT	Speech and Language Therapy
WHO	World Health Organization
ASHA	American Speech-Language Hearing Association
ASD	Autism Spectrum Disorders
HCPs	Health Care Providers
IPP	Inter-professional Practice
IPE	Inter-professional Education
COR	Crude odds Ratio
AOR	Adjusted Odds Ratio

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Speech-language pathology is one profession among many that makes up the interdisciplinary team in emergency care hospital settings. Speech-language pathologists (SLPs) collaborate hand by hand with other healthcare professionals, including nurses, doctors, social workers, dietitian, and other rehabilitation providers (1). Therefore, members of various healthcare wings need to have a sufficient understanding of the SLP's role. This knowledge allows them to make appropriate referrals to SLPs and effectively contribute to meeting the needs of patients with speech and language difficulties..

Speech pathology is specialized healthcare service that assesses, diagnoses, and treats individuals with communication and swallowing difficulties. By providing effective speech therapy, patients and their families can experience an improved quality of life. This is achieved by enhancing the patient's ability to communicate effectively and actively participate in various aspects of their life. However, the successful provision of speech therapy services depends not only on the availability of resources but also on the knowledge, attitude, and practice of healthcare providers delivering these services. (2)

Yekatit 12 Hospital, a prominent healthcare facility, is well-known for providing a wide range of medical services to the population it serves. Among the services offered, the hospital has established a dedicated unit for speech therapy. This unit aims assessing ailments of patients with speech & language disorders, providing assessment, intervention, and support to help them overcome their communication challenges. However, despite the presence of this specialized unit, there is limited information available regarding the knowledge, attitude, and practice of the healthcare professionals working on this particular area.

Understanding the perspectives and competencies of healthcare providers is crucial to ensure the delivery of high-quality speech therapy services. The knowledge of healthcare providers regarding speech therapy services encompasses understanding various speech and language disorders, their etiology, appropriate assessment and intervention techniques, and the use of relevant assessment tools and resources. Adequate knowledge equips healthcare providers with

the necessary foundation to make informed decisions in their clinical practice and deliver evidence-based care to their patients. (3)

In addition to knowledge, the attitude of healthcare providers is a significant factor in the delivery of speech therapy services. Developing a constructive therapeutic relationship and facilitating effective communication between healthcare providers and patients requires key attitudes and qualities, such as empathy, patience and open mindedness. (1) A supportive and encouraging attitude can enhance patient engagement, motivation, and compliance with therapy, ultimately leading to better treatment outcomes. (4)

The practice of healthcare providers reflects the application of their knowledge and attitude in delivering speech therapy services. This includes the implementation of appropriate assessment and treatment techniques, tailored to each individual's unique needs and goals. Regular monitoring of patient progress, effective communication with patients and their families, and collaboration with other healthcare professionals involved in the care process are also integral aspects of competent practice. (5) By ensuring comprehensive and individualized care, healthcare providers can maximize the benefits of speech therapy interventions. (6)

Final outcomes of a study would be a valuable resource for hospital administrators, policymakers, and healthcare professionals involved in speech therapy services. Understanding the knowledge, attitude, and practice of healthcare providers will help identify gaps and areas for improvement in the delivery of speech therapy services at Yekatit 12 Hospital. The results could inform the development of targeted interventions, educational programs, and training initiatives that can enhance the knowledge, attitude, and practice of health providers, ultimately leading to improved speech therapy services and better prognosis for patients.

Most of all, study findings could have an input for broader field of speech therapy by providing insights into the current state of speech therapy services at Yekatit 12 Hospital. The results could help identify common challenges, effective practices, and areas requiring further research and development. Sharing this knowledge with the larger healthcare community could facilitate the advancement of speech therapy practices, promote evidence-based care, and improve patient outcomes not only at Yekatit 12 Hospital but also in other healthcare facilities facing similar challenges.

1.2 Statement of the Problem

Speech therapy plays a crucial role in enhancing communication and swallowing abilities, particularly for individuals facing speech and language disorders. Yekatit 12 Hospital, as a prominent healthcare institution, is expected to provide comprehensive and effective speech therapy services. However, the success of these services relies heavily on the knowledge, attitude, and practices of the health care providers working within the unit.

Health care providers act as a source of referral for speech and language therapists. But Observational studies shows that health care professionals' awareness on speech therapy service is very low. In Ethiopia such type of study assessing health care workers attitude and knowledge on speech therapy has not been done yet. So Yekatit 12 Hospital as an only governmental speech therapy center, it's logical to begin such study from an institution itself to spread to all over the country. The pilot study research of India exposed that 51.1% of medical practitioners participated in the study were not knowing availability of the speech-language therapists and their scope of practice, speech disorders such as voice disorders and stuttering were commonest problems known to health providers. Contrarily, other language problems were not known.

Despite the recognized importance of speech therapy, there is knowledge gap to understand the perspectives of health providers at Yekatit 12 Hospital regarding the speech therapy services offered. This research aims to investigate the knowledge levels of healthcare professionals regarding speech therapy, their attitudes towards the importance of speech therapy services, and their actual practices in delivering and supporting speech therapy interventions.

The assessment of these key aspects, encompassing knowledge, attitude, and practice, will provide insights into potential barriers and facilitators that may impact the effective implementation of speech therapy services at Yekatit 12 Hospital. By identifying these factors, the research intends to contribute valuable information that can be used to enhance the quality and accessibility of speech therapy services, ultimately improving patient outcomes and satisfaction.

1.3 Basic Research Questions

1. What is current knowledge of health care providers at Yekatit 12 Hospital regarding speech therapy services?
2. What are the attitudes of health care providers towards incorporating speech therapy into their daily practice?
3. What is the current practice and utilization of speech therapy services by health care providers at the hospital?
4. What factors are associated with health care providers' practice of speech therapy service?

1.4 Research Objectives

1.4.1 General Objective

To assess and understand the current level of knowledge, attitude, and practice among healthcare providers at Yekatit 12 Hospital regarding speech therapy services at the unit in May 2024.

1.4.2 Specific Objectives

1. To assess current knowledge of healthcare providers at Yekatit 12 Hospital regarding speech therapy services at the unit in May 2024.
2. To evaluate the attitudes of healthcare providers at Yekatit 12 Hospital towards speech therapy and its importance in patient care at the unit in May 2024.
3. To examine the current practices of healthcare providers at Yekatit 12 Hospital in relation to speech therapy services at the unit in May 2024.
4. Identify the perceived barriers and challenges faced by healthcare providers at Yekatit 12 Hospital in collaborating with speech therapy unit in May 2024.

1.5. Significance of the Study

Speech therapy service is an occupation which ought to be incorporated to general health care service as a new field of study in Ethiopia for holistic healthcare service. Such type of research has not been published yet here in Ethiopia and this will be an input for further related researches going to be done in the future.

As a new research is done, the study might help to enable healthcare providers to be well-informed, have positive attitudes, and follow best practices in speech therapy, it could lead to improved patient outcomes. The study would also uncover specific areas where healthcare providers may require additional training or education in speech therapy. This information would guide the development of targeted training programs to enhance the skills and knowledge of the healthcare staff. The results of this study might have positive contributions for Yekatit 12 hospital policies and protocols related to speech therapy services.

1.6. Limitation of the Study

1. As a new scope of study, there are no published researches in relation to this topic in Ethiopia and there are limited literatures from abroad too. Additionally, constraints such as time and budget might disable depth & breadth of this study.
2. Social desirability & recall Biases: - Respondents provided answers that they believe are socially acceptable or desirable rather than expressing their true attitudes and practices. This bias can affect the accuracy of self-reported data.
3. Cross-Sectionality of study (data was collected at single spot), it didn't capture changes in knowledge, attitudes, and practices over time.

1.7. Scope of the study

This study was constrained regarding its concept as well as geographical coverage. It was delimited to understanding the current level of knowledge, attitude, and practice among healthcare providers at Yekatit 12 Hospital regarding speech therapy services and also it was conducted at only one center; Yekatit 12 Hospital located in Capital city of Ethiopia, Addis Ababa.

1.8. Operational Definition

- Knowledge: Describes a knowledge assessment with 12 questions, where a score of 6 or higher (50% or above) indicated good knowledge, and a score below 6 (less than 50%) indicated poor knowledge.
- Attitude: There are 10 questions used to assess a person's attitude. Each question is scored as follows: 3 points for each "agree" response, 2 points for each "neutral" response, 1 point for each "disagree" response. A score of 15+ points (50%+) is considered a favorable attitude, while less than 15 points (50%) is an unfavorable attitude..
- Practice: Specifically pertains to referring cases for speech therapy services and working in collaboration with SLPs, encompassing the actions, strategies, and routines undertaken by HCPs to attain desired outcome for patients having speech, language and swallowing difficulties. Score greater than 4points/ 50% will be “good practice” and less than will be labelled as “bad practice”.
- Health care providers/HCPs: were indicating individual health worker or an institution licensed/allowed by concerned body to practice diagnosis, health care and management.
- Speech and language Pathology: is a health care and academic field of study encompassing individuals of all ages, from infants to the elderly, to assess, diagnose, and treat these various communication and swallowing challenges. It employs a range of evidence-based interventions to help clients improve their communication skills, swallowing function, and overall quality of life.

CHAPTER TWO

REVIEW OF RELATED LITERATURES

Single health care profession alone cannot serve better health care for patients. Inter professional collaborative practice is necessary and it is a process that includes communication, discussion, synergistic influence of grouped knowledge and skills for decision making. (3) As noted from routine practice, poor inter professional collaboration can always have a negative impact on the betterment of patient treatment options. (4)

Were the health care team is collaborating efficiently, and then there could be meaningful mutual understandings, communications, and respect among the team. (5) This will be succeeded when there is collaboration between professions. The WHO has developed a “Framework for Action on Inter professional Education and Collaborative Practice” to apply the structure made easy for different professionals during their interaction in a global context for betterment of practice to the educators, decision-makers, policy makers, social leaders, health care workers, and health advocates in general. (6)

Speech-language pathologists strive to fulfil the social needs for people with communication problem to make better their life quality. Researchers Mahmoud and Alkhamra noted that 70% participants in the study had no clear knowledge of speech-language disorder and language problems. (7) Another related research on community outlook on speech-language pathology and communication problems in capital city of Malaysia explored that about 50% of the participants had good understanding about speech-language pathology and very low understanding about communication problems. In addition to this, those whose educational status is masters or PhD had better attitudes towards communication problems and speech pathologists than those education status is degree/diploma. (8)

Giving awareness for health professionals about speech-language pathologists might expand the service delivery and empower SLPs to help young and adolescents with communication problems who were not linked to SLPs or who might be linked later than the average better time. Cautiously, training other health care workers to do what SLPs do can be fatal. All parameters and curriculums of what SLT do that made evaluations and managements successful could be

taught within few week terms training and education environment to professionals who didn't have in-depth graduate knowledge required for speech-language therapists. Teaching other HCPs to do what SLTs do would worsen prognosis for patients or even that might be very fatal. (9)

Building trust and respect between professions is a key for better health care outcome. Speech therapists and physicians should collaborate effectively through shared patient evaluations and interdisciplinary meetings. Physicians ought to refer patients to speech therapists for specific symptoms, while speech therapists can alert physicians to medical issues observed during therapy. Weekly interdisciplinary meetings could provide a platform for discussing patient progress, condition and coordinating care. Their teamwork ensures a holistic approach in addressing communication disorders and overall health concerns. This ensures a unified approach in managing patient health. (10)

As separate, but interconnected fields of studies, Speech therapists and physicians should build trust and rapport with each other, as well as with the patient and the family. They should establish and maintain a good and professional relationship, based on mutual respect and openness. They should also show empathy, compassion, and support, and recognize and appreciate each other's efforts and achievements. (11)

As a complicated and sophisticated treatment is wanted by clients with speech disorders, an inter-professional move with team coordination among the speech pathologists and other health providers, especially nurses, is significant (12). According to the WHO, the speech pathologists ought to train and work in line with other health providers to escalate the appreciation, understanding, and treatment of clients with swallowing problems. (13)

Those undertakings make better the collaboration between health care providers, warrants the correct referrals linked by seniors, improve the patient's better prognosis, and permit the more safe treatment for the patient (14). Because of combined trials, the attitudes of other health care providers including nurses/psychiatry nurses had a key role in the early linkage of patients with speech disorders to speech pathologists. A research done in Jordan showed that significant number of dentists believed in the significant work of SLP in the patient treatment (15).

However, such collaborations encounter obstacle with lack of proper knowledge and misunderstanding of areas of practice for SLPs. As an example, a research study showed poor understanding regarding the scope of practice of SLPs among health providers in an emergency

patient care set up in the USA (16). The results were in line with the findings of research done in Canada showing that nurses, physiotherapists, doctors and occupational therapists elaborated a poor knowledge of the role of Speech and language pathology (17). Strengthening this, a recent research involving American undergraduate degree students towards the SLP department showed a lack of understanding of the scope of practice of SLPs (18). Similarly, the study done in the Central Queensland in Australia showed that community attitude of speech therapy occupation among the residents was reported as minimal. (19)

The study done in Pakistan on 200 health providers such as physiotherapy, audiology, general nurses, nutritionists, physicians, and psychiatry, showed very poor knowledge and unfamiliarity on the scope of SLP, and almost no communication and patient linkage to SLPs. (20) Similarly, study done on South African general nurses reported that there is lack of understanding and less familiarity with the scope of SLP in pain during swallowing treatment (18). Therefore, there is ample evidence in the study results that the scope of the practice of SLPs were still not well acknowledged by the society and health providers as testimonies showed in different continents, indicating the importance of good inter departmental cooperation.

The good news is, in the Canada and USA, professional cooperation was established between the SLPs and occupational therapists, audiologists, physiotherapists, and general nurses. (20). The reality behind these collaborations is promoting the interdisciplinary significance and team cooperation for new scope of knowledge. (4,10,21) Inter professional cooperation had been indicated in the study done in the USA to be a role model approach to facilitate and escalate understanding of the roles of health care providers through on job trainings including students. (15). Additionally, some related researches among the SLPs, physiotherapists, and doctors recommended that collaborations created in the Saudi Arabia, which was indicative of ensuring the better quality and modest care is given to the patients. (21)

Thus, this research was undertaken to dig out the the inter-professional knowledge, attitude and practice among HCPs at Yekatit 12 Hospital regarding the scope of practice and role of the speech language pathologists in the unit.

CHAPTER THREE

RESEARCH METHODS

3.1 Research Design

The research was Hospital based quantitative cross-sectional study which was supported by qualitative data.

3.2 Research Area & Study Population

The study area was different departments in medical college of Yekatit 12 Hospital. The center is at 6Kilo, Addis Ababa, Ethiopia. Yekatit 12 Hospital was oldest Hospital in Ethiopia which, established in 1923 by Swedish Physician Dr. Ayner It's metropolitan hospital in almost all Health care services, specially outshining as burn center, obgyne service, and dental amidst of others. In the past 100 years, it has been a center for leading medical services. Now the hospital has 130 specialist and sub specialists, 181 general practitioners, residents and public health professionals, 520 different types of nurses and 59 pharmacists, with Subtotal of 890 Health care providers.

Burn/CLP Project at Yekatit 12 Hospital was established in 2000, mainly focusing on Plastic Surgery for Burn and Cleft Lip and Palate. Gradually the project with Yekatit 12 Hospital added Speech therapy unit. At this time The Unit has 3 speech therapists.

The researcher selected the Unit because it's the sole governmental institution in Ethiopia providing speech therapy service.

3.3 Sample Selection Procedure

Participants of study were selected based on the below sample size calculation for known population size, i.e. **890**.

$$n = \frac{\frac{z^2 * p(1 - p)}{e^2}}{1 + \left(\frac{z^2 * p(1 - p)}{e^2 N}\right)}$$

Where n: is minimum sample size of study subject

N: is Population size

Z: - Z-score value at 95% CI which by default is 1.96

P: - proportion of participants with good Knowledge, attitude & practice. i.e. 50%(0.5)

e:- the margin of error taken is 5% (0.05).

By using the above formula,

$$n = \frac{\frac{(1.96)^2 * 0.5(1 - 0.5)}{0.05^2}}{1 + \left(\frac{(1.96)^2 * 0.5(1 - 0.5)}{(0.05)^2(890)}\right)}$$
$$n = \frac{\frac{3.8416 * 0.25}{0.0025}}{1 + \left(\frac{3.8416 * 0.25}{2.225}\right)}$$
$$n = \frac{384.16}{1.4316}$$
$$n = 268.3, \sim \underline{\underline{269}}$$

Therefore 269 respondents were needed to represent the whole Yekatit 12 Hospital HCPs.

Then selection of each study participants was by simple random method after getting list of each department members. For Qualitative data, open ended questions were analyzed and probing was held for **all (10)** department heads of the Hospital to support quantitative data.

Source Population: All health-care providers currently working employed in Yekatit 12 Hospital.

Study Population: Selected health-care providers currently working employed in Yekatit 12 hospital based on inclusion/exclusion criterias.

Sampling Unit: Lists of each department's professionals.

Exclusion and Inclusion Criterias: All health-care providers working employed in Yekatit hospital for the past 6months and above will be included and professionals on annual leave/maternity leave and hired within the past less than 6months will be excluded.

Study Period: The total period of Study will be undertaken from May 1, 2024 to May 15, 2024.

Dependent Variables: Knowledge, attitude and Practice

Independet Variables: Age, Gender, profession, Experience, Training, no. of SLPs, Types of cases and etc...

3.4 Data Collecting Instruments

The researcher was adopted semi structured questionnaire interviewing tool to collect the data. For Quantitative data, the questionnaire was filled by health care providers and then to be analyzed by the researcher. For Qualitative data, Selected Department heads were interviewed using prepared probing questions. The questionnaire was prepared in English.

3.5. Data Collection Procedure

Five experienced data collectors who were not affiliated with the selected center, along with one supervisor, gathered the data. The data collectors received one day of training on the questionnaire and data collection procedures. The principal investigator oversaw all activities. The data was collected systematically using a self-explanatory questionnaire designed to ensure data accuracy and enhance the precision of the results. To assess the questionnaire's suitability, completeness, accuracy, and clarity, 5% of the sample population was evaluated. The pre-tested samples were excluded from the final sample population.. Cure Hospital was selected for samples quality control as pretest.

3.6 Data Analysis Procedure

At the conclusion of the study, the collected data on knowledge, attitudes, and practices were coded in an Excel spreadsheet. Data were exported to SPSS version 25.0 for statistical analysis. Then descriptive statistical analysis with bivariate analysis to determine the presence of associations between the variables and multivariate analysis was used to assess the significance of the associations identified in the bivariate analysis. The results of the data analysis were presented in textual descriptions, tables & graphs, reported with a 95% Confidence Interval and measures of the strength of the associations. Furthermore, frequency distribution of dependent and independent variables was worked out. For qualitative data, transcripts were annotated, data were conceptualized then segmented. Finally segments were analyzed and result was written.

3.7 Ethical Consideration:

Data was obtained after informed consent was taken. Confidentiality was maintained through the use of codes instead of names in the questionnaires. The study received ethical approval from the Addis Ababa Public Health and Emergency Management Directorate.

3.8 Result Dissemination:

After thesis, the results of the study is to be shared with the Addis Ababa Public Health Research and Emergency Management Directorate.

CHAPTER FOUR

RESULT AND DISCUSSION

4.1 Results

4.1.1 Socio-demographic Characteristics

The study had a high participation rate(98.1%), with 264 healthcare providers taking part. The average age of the participants was around 30 years old, with a relatively small spread in ages, as indicated by the standard deviation of 5.17 years. Out of those participated, 61.4% (162) were males, while 50.4% (133) were between 31 and 40 years old. The majority of the participants were nurses and midwife/psychiatry nurses (38.5% and 36.1%, respectively). The care providers had an average of 7.31 years of experience, with a standard deviation of ± 5.3 years. Out of the total respondents, 147 (55.9%) were working at Pediatric department. (Table1).

Table 1:- Socio-demographic characteristics of Healthcare Providers who were employed at Yekatit 12 Hospital, Addis Ababa, Ethiopia, May 2024

Variables	Category	Frequency	Percentage
Age	20-30	118	44.8
	31-40	133	50.4
	41-50	7	2.6
	≥ 51	6	2.2
Sex	Male	162	61.4
	Female	102	38.6
Professionals	Nurses	101	38.5
	Midwifery & Psychiatry Nurses	96	36.1
	Specialist Doctors	7	2.7
	General Practitioner	38	14.3
	Physiotherapists and others	22	8.4
Department currently assigned at	Internal Medicine/Neurology	76	28.7
	Pediatrics	147	55.9
	Surgery	33	12.5
	Others/Gynecology	8	2.9
Experience in Years	<1	26	9.7
	1-5	104	39.5
	6-10	94	35.7
	≥ 11	40	15.1

4.1.2 Knowledge of the respondents about speech therapy services

This study revealed that overall knowledge score is 59.5% (157). The majority (71.1%) of the respondents has been informed about speech therapy services. Information source for 167 (63.1%) was working place/hospital while for the rest 22% is colleagues, for 11.9% is friends/family and 3% is from course work/mass media. The perceived self-knowledge towards speech therapy services for 86.8% (163) is rated as good. Among informed respondents, all of them answered yes when asked whether they know common speech and language disorders that could be treated by speech therapy, but most of the respondents (93.1%) only knows cleft lip and palate disorders. Regarding the intervention strategies, 79.5% of the respondents stated oromotor exercises, and 67.3% selected physical exercises, while only 13% of the respondents correctly mentioned all techniques used for intervention. All of the respondents answered that they didn't received any formal training on speech therapy during their career. Only 49.5% (93) used references to stay updated on speech therapy services among the informed ones and the source of references are mainly professional journals 91.5% (172) (Table 2).

This result is supported qualitatively by 38 years old and one of departments head in hospital as the following:

“... explained that even if he knows that the presence of speech therapy unit at hospital, he didn't knows the details of the service given currently. What he stated was he knows there's cleft lip and palate surgery correction was done and after that speech therapists might help in swallowing issues. He told that he never experienced training concerning speech therapy in his past 12 years of career life at this hospital. He also supported that the idea of incorporating the unit with daily routine activities of the hospital rather than considering as a separate project running itself autonomously.”

Table 2:- Knowledge of speech therapy services among Health care providers employed at Yekatit 12 Hospital, Addis Ababa, Ethiopia, May 2024.

	Category	Frequency	Percent
Informed of the speech therapy services offered.	Yes	188	71.1
	No	76	28.9
Source of information	Hospital	119	63.1
	Colleagues	41	22

	Category	Frequency	Percent
	Friends/family	22	11.9
	Course work/ mass media	6	3
Perceived Self-knowledge about speech therapy services score	Excellent	10	5.2
	Good	163	86.8
	Fair	12	6.3
	Poor	3	1.7
	No Knowledge	0	0
Whether or not knowing Common speech and language disorders	Yes	188	100
	No	0	0
Disorders treated by SLPs*	Voice disorders	98	52.1
	Swallowing disorders	115	61.2
	Resonance problem for cleft lip and palate	175	93.1
	Suttering/aphasia	49	26
	Habilitation/rehabilitation/others	77	41
Whether or not knowing intervention strategies*	Yes	188	100
	No	0	0
Intervention strategies used by SLPs*	Oro motor exercises	149	79.5
	Physical exercises	127	67.3
	Stuttering/stammering	9	4.9
	Cognitive communication	21	11.2
	Pressure points & drugs	27	14.2
	Linguistic skills	53	28.4
	Mobilization	23	12
Whether or not taking formal training/education on SLP	Yes	0	0
	No	264	100
Whether or not using references to stay updated on SLP	Yes	93	49.5
	No	95	50.5
Resources used to stay updated*	Professional journals	85	91.5
	Online courses	19	20.4
	Interaction with speech therapists	24	25.9
	Workshops and seminars	0	0
Overall Knowledge score	Good	157	59.5
	Poor	107	40.5

- *Multiple answers were possible.

4.1.3 Attitude of the respondents towards speech therapy services

Concerning attitude towards speech therapy services, around 78% of the respondents agreed with the availability of speech therapy department in all hospitals and 74.2% agreed with referral of patients from Doctors to SLP as a mandatory. Contrarily, around 44.7% of the respondents disagreed with recommending family member or close relative to become speech and language pathologist. Overall, 72.8% participants had favorable attitude (Table 3)

This finding is supported by the following idea from 34 years old head of one of the Unit;

“... He explained that he had good attitude towards speech therapy services as it is sole governmental center in the country, but he annotated that there’s huge need of the professionals

since the patient waiting list is about more than 2000, according to his information from joint departments meeting. As his opinion employing much number of SLPs and expanding the unit should given priority. He also pointed issue of attitudes of society considering congenital problems of children as a curse and health care providers sometimes consider as incurable too, for this mass campaign and media promotion on scope of SLP s might be a solution”

Table 3:- Attitude towards speech therapy services among health care providers employed at Yekatit 12 Hospital, Addis Ababa, Ethiopia, May 2024.

Variables	Agrees	Neutral	Disagrees
Speech therapy is an important and integral part of patient care and essential service in a hospital setting.	185 (69.9%)	56 (21.4%)	23(8.7%)
The main benefits of speech therapy services in a hospital is for Patients in need	234 (88.6)	16 (5.9%)	14 (5.5%)
There is a need for more awareness and education among healthcare providers about speech therapy services.	192(72.8%)	67 (25.2%)	5 (2%)
Referring patients from doctors to SLP is mandatory	196(74.2%)	58(21.9%)	10(3.9%)
Speech therapy services are effective in improving patient outcomes	194(73.7%)	53(20.0%)	17(6.3%)
Will you recommend for your family members to become SLP?	77(29.0%)	69(26.3%)	118(44.7%)
Speech therapy is adequately integrated into the healthcare services provided at Yekatit 12 Hospital	64(24.2%)	87(32.9%)	113(42.9%)
There are NO any misconceptions or myths about speech therapy among healthcare professionals	170(64.5%)	56(21.4%)	38(14.3%)
There are NO perceived barriers exist in implementing speech therapy/referring patients to speech therapy services	120(45.3%)	30(11.3%)	114(43.3%)
Do you think that SLP department should be available in all Hospitals?	206 (78%)	38 (14.6%)	20(7.4%)

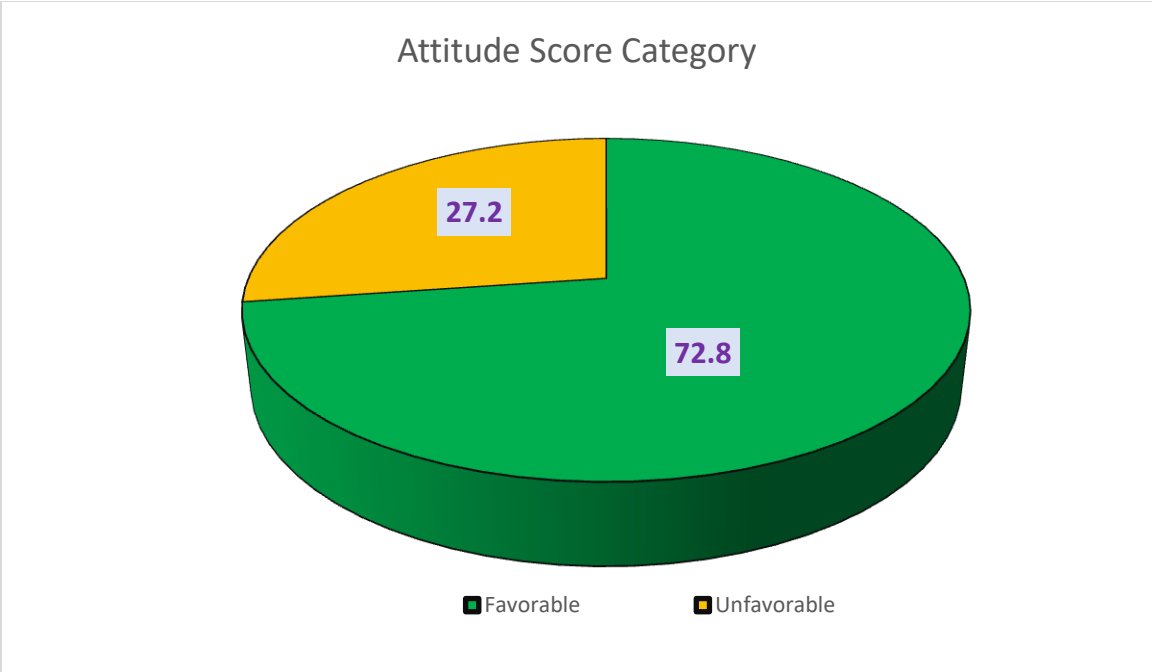


Figure 1:- Overall Attitude Score towards speech therapy services among health care providers employed at Yekatit 12 Hospital, Addis Ababa, Ethiopia, May 2024., (N=264)

4.1.4 Practice regarding referring patients for speech therapy services

About 95 (36.0%, (95%CI: 31.3% - 40.7%)) of health care providers practiced referral of patients for speech therapy services while 169 (64%) never referred within past 1 year. (Figure 2).

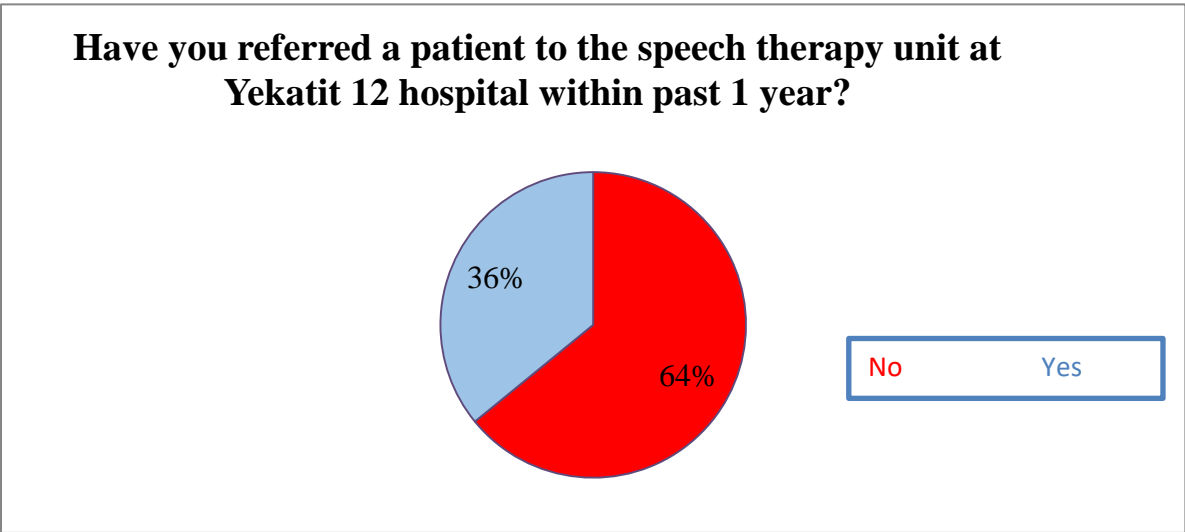


Figure 2:- Overall practice of referral to speech therapy services among health care providers employed at Yekatit 12 Hospital, Addis Ababa, Ethiopia, May 2024., (N=264)

Among the 95 participants who had practiced referral to speech therapy services within the past 1 year, 55.6%(53) practiced it rarely, 13.1%(12) used it occasionally and 30.3% (29) practiced often. However, only 19 (20%) of those who practiced referral to speech therapy services, within the past 1 year, gave an affirmative response when asked if they still did so routinely under every circumstances when prompted.

On the other hand, the most frequent referred cases from participants are Cleft lip palate, stroke and Intellectual disabilities with percentages of 62.3%, 48.8% and 37.9% respectively. Among the participants who practiced referral, 95% collaborate with SLP professionals rarely and all of them believe in increasing collaboration in every possible ways listed on questionnaire. (Table 4)

This result of practice is supported by the following qualitatively annotated data from 41 years old department head:-

“...honestly speaking we didn’t consider SLPs as health care providers, but probative staffs and that’s why pertaining cases from Physicians to SLPs isn’t an habit presently, there’s huge gap of the unit’s activities in line with College’s mission and daily activities. The unit is lead mainly by Burn SLP project and we usually think of the SLP unit as a separate field, but for significant change to be brought, incorporating the SLP to the broad wing of the hospital is mandatory. Such researches, trainings and joint meetings should be done routinely”

Table 4:- Overall practice of referral to speech therapy services among health care providers employed at Yekatit 12 Hospital, Addis Ababa, Ethiopia, May 2024., (N=264)

Variables	Category	Freq uenc y	%
Have you referred a patient to the speech therapy unit at Yekatit 12 Hospital within past 1year?	Yes	95	36
	No	169	64.0
If yes how often?	Rarely	53	55.6
	occasionally	12	13.1
	Often	29	30.3
	Always	1	1.1
What factors influenced you to refer patients to SLP services?*	Severe speech disorder	67	70.5
	Patient’s request	49	51.6
	Availability of services	55	57.9
	Others/routine activity/	19	20
Which clinical cases have you referred yet?*	Developmental DO	17	17.9
	Stroke	47	48.8
	Cleft lip/palate	60	63.2

	Intellectual Disability	36	37.9
	Swallowing problems	12	12.7
	Others/listed	15	15.8
How frequently do you collaborate with Speech language pathologists?	Always	1	1.1
	Sometimes	2	2.1
	Rarely	90	95.0
	Never	2	2.1
If you were not practicing referral yet, what are your reason/s?*	No cases	7	4.2
	Not aware of SLP scope	74	43.8
	Long waiting list	85	50.3
	Few no. of SLPs	36	21.4
	Poor patient outcome	32	18.9
Have you observed good patient outcome feedback after referral to SLPs	Yes	17	18
	No	78	82
How do you think collaboration between HCPs and SLPs could be improved? *	Increased communication	264	100
	Joint training session	244	92.4
	Interdisciplinary meeting	255	96.6
	Multidisciplinary round	260	98.5

- *Multiple answers were possible.

4.1.5 Factors associated with referral practice of health care providers

Bivariate analysis

Table 5: Bivariate/unadjusted factors associated with the practice of referral to speech therapy services among health care providers employed at Yekatit 12 Hospital, Addis Ababa, Ethiopia, May 2024.

Variables for Bivariate unadjusted analysis	COR	95% CI	P value (<0.2)
Years of experience	2.01	1.32-3.07	0.17
Being in pediatrics department	1.91	1.14-3.23	0.19
Having knowledge of speech therapy services availability	6.38	3.49-11.67	0.09
The cases being cleft lip and palate	3.36	2.08-5.45	0.15
The cases being swallowing disorders	5.43	1.51-19.54	0.16
Being not trained on SLP services	6.23	3.98-9.76	0.18
Staying updated on SLP services	3.79	2.10-6.84	0.19
Using professional journals to stay updated	0.09	0.05-0.16	0.17
Having less frequent collaboration with SLPs	9.15	2.28-9.28	0.17
Long waiting list of patients	6.53	3.61-11.82	0.089
Favourable attitude	4.39	2.49-7.70	0.14

Multivariable Analysis

In an adjusted multivariable logistic analysis of regression, having knowledge of speech therapy service availability with AOR= 6.061 (95% CI = 3.091-11.886), the case being cleft lip and palate AOR= 2.98(95% CI =(1.39-6.4), staying updated on SLP services AOR=5.242 (95%CI= 2.652-10.361) and favorable attitude, AOR = 2.13 (95%CI = (1.87-3.79) were significantly associated with provider's *better practice* status of referral to SLPs, while being not trained on SLP services AOR = 0.364 (95% CI= 0.13-0.94), long waiting lists of patients AOR= 0.47 (95%CI = 0.25-0.60) & having less frequent collaboration with SLPs AOR = 0.167 (95% CI = 0.061-0.460), were significantly *associated with health care providers low practice* of referral status to SLPs after controlling confounder (Table 5).

Table 6: Multivariable factors associated with practice of referral to speech therapy services among health-care providers employed at Yekatit 12 Hospital, Addis Ababa, Ethiopia, May 2024.

Variables	AOR(95%CI)	P value
Having knowledge of speech therapy service availability	6.061 (3.1-11.8)***	0.001
The case being cleft lip and palate	2.98(1.39-6.4)	0.005***
Long waiting lists of patients	0.47 (0.25-0.60)	0.001***
Staying updated on SLP services	5.24 (2.65-10.36)	0.001***
Being not trained on SLP services	0.36 (0.13-0.94)	0.005
Having less frequent collaboration with SLPs	0.17(0.06-0.46)	0.001
Favorable Attitude	2.13(1.87-3.79)	0.034

Notes: 1-reference, 95% Confidence Interval, p-value<0.05*, P-value≤0.01** , P-value≤0.001 ***, statically significant, AOR (Adjusted Odds Ratio), Multivariable goodness of fit, Hosmer–Lemeshow test (P-value=0.969), so the model was perfectly fitting

4.2 Discussion

In this study, 36% (95% CI: 31.31 - 40.71) of the health care providers practiced referral to speech therapy services at the unit. Having knowledge of speech therapy service availability, the case being cleft lip and palate, staying updated on SLP services, being not trained on SLP services, having less frequent collaboration with SLPs, long waiting lists of patients and favorable attitude towards speech therapy services were significantly associated with referral practices to SLP unit.

According to this study, the knowledge status of referral to speech therapy services which is 59.5%, was different from similar study conducted in Iran, as of outlook by Kenny and Adamson(11) elaborated that only 22% of the speech therapists acknowledged that health care providers had good knowledge and better insight about SLPs. The variation in results could be explained by factors such as the number of participants, how they were selected, the location and structure of the studies, the duration of follow-up, and the level of expertise of the speech therapists involved in the treatment.

This study also showed that health-care providers who had knowledge about SLPs reported that their main site of inquisition was working hospital (63.1%) then followed by colleagues(22%). In opposite to this pilot study conducted at India showed that 48.3% participants got information at the time of their college study. Similarly, almost all the participants suggested that a course of speech-language pathology should be given for medical students having credit hours routinely. Almost 25% of them got knowledge from health facilities and a few through families, colleagues and friends. Mass media was a tool for education for all societies without socioeconomic status, but oppositely, in our study, mass media was not significant source of information at only 3% and in line to study in india which is 5% only too. (9)

Regarding the intervention strategies, the most frequently known scope of SLPs is oromotor exercises(79.5%) followed by physical exercises (67.3) with other strategies least known. In line with this study done in Saudi Arabia, showed that for stroke, traumatic brain injury, Alzheimer dementia, and laryngeal pathologies in need of cognitive therapy, most of health care providers

didn't support referral to SLPs, showing their narrow knowledge gap for cognitive therapy, which was the result of absence in collaborating with the SL therapists. The scope of practice for the SLP includes activities of cognition like, attention, memory, problem solving and executive functioning's (7,12). So, the clients having such issues must get the SLT services. This output is also in line with research result in Nova Scotia, Canada, which investigated medical students, nurses, occupational therapy trainees, and physiotherapy students grasp poor understanding about the scope of the SLPs in cognition language therapy (13). Additionally, Canadian research showed that less time is spent by the SLPs giving speech and language intervention for non-speaking adolescents in emergency and critical settings. (11)

Again almost similar to this study but contrary to study done at Saudi arabia, study done in Bihar India regarding strategies of intervention used by SLPs showed that participants had poor understanding on the techniques used. Stuttering therapy method was highly known (94.9%), subsequently oromotor exercises (89.9%), ACC therapy (84.6%), and enhancement of linguistic skills (81.3%). Still, some wrong understandings were reported in Indian research like our study, such as using physical exercise (67.3%), mobilization (12%), and both pressure points and drugs (14.2%). Such wrong output on the strategies of intervention clarified that better education and awareness was in need for the providers to avoid the concept gap. The above concept gap shows that many of participants were confused with the services of physiotherapists with SLPs services. In another way he knowledge gap could be because of less awareness of health care providers about the scope of practice executed by physiotherapists. (16)

The study done on attitude showed that 78% of participants agreed with the availability of SLP unit in all health care centers in line with study done in india which is 95%. Additionally,69.9% of the providers believe that presence of SLPs is necessary which is in line with 51.7 with indian study. (9) In contrary to the study in India, in which 91.7% having knowledge about the SLPs convinced that they might support their family member to be an SLP in the future career, only 29% of participants encourage family members to study SLP in our study. (9) The main reasoning stated on questionnaire was that "less salary and not established branch." There is also misconception of parents on the cause of speech problem as a curse for Intellectual disabilities for which they think there is no cure. SLPs observed that parents had poor concept about their child's in proficient language, poor speech, or intellectual disabilities due to a lack of detailed knowledge (11) To narrow the gap orientation on speech-language therapy should be given priority, which might contribute to give helpful insight for health care providers.

According to this study the practice of referral towards speech therapy services is very low in which it is only 36% and it was difficult to discuss about the details of comparison and contrast since there is limitation of literatures done on practice on other studies abroad and almost no studies done in our country.

4.3 Summary of the Results

Summarizing the study results in terms of basic research questions:-

The level of knowledge among health care providers at Yekatit 12 was 59.5% among 264 participants. Even if the number seems good knowledge score(>50%) only limited number of cases were known as practiced by SLPs, mainly cleft lip and palates(93%). So knowledge gap is still existed about scope of SLPs.

The overall attitudes of health care providers towards incorporating speech therapy services into their daily practice was 78%, which is favourable and all of the one having knowledge also had favourable attitude.

The current overall practice of referral for speech therapy services by health care providers within the past 1 year was only 36%, which is poor practice habit and factors associated with such poor practice by health care providers were having poor knowledge of speech therapy services availability, only knowing selected scopes of speech therapy services such as cleft lip and palate only, being not trained on SLP services, long waiting lists of patients and having less frequent collaboration with SLPs were significantly associated.

5. Strength and limitations

5.1 Strength

The study employs a combination of quantitative and qualitative data collection methods to enhance the reliability of the gathered data. This study also included all multidisciplinary professionals involved in referral process to speech therapy. Most significantly the study topic/concept has not been done previously in our country, which makes it unique.

5.2 Limitation

The questionnaire used in the study may be prone to two types of bias: Recall and social desirability biases. Additionally, the lack of published research on this topic within Ethiopia makes it challenging to compare findings and engage in meaningful discussions. The scarcity of studies conducted outside of Ethiopia also limits drawing comparisons from other contexts.

1. Conclusions and Recommendations

Conclusion

Living and working within the same institution and place, there was low overall knowledge score even if it is good in terms of operational definition, relatively favorable attitude but very low practice of referring cases to speech therapy services. Having knowledge of speech therapy service availability, the case being cleft lip and palate, staying updated on SLP services, being not trained on SLP services, having less frequent collaboration with SLPs, long waiting lists of patients and favorable attitude towards speech therapy services were significantly associated with referral practices to SLP unit.

Recommendations

Health care program initiatives and strategies should prioritize enhancing in-service and ongoing professional development training for health care providers. This will help address the gaps in their knowledge, attitudes, and practical skills, ensuring they are better equipped to provide high-quality care.

To Addis Ababa Public Health and Emergency Management Directorate with Addis Ababa City Administration Health Bureau

- ✓ As a sole governmental Speech Therapy Unit in the country, AACAHB Should focus on **the Unit to upgrade to Department**, especially increasing the number of SLPs to decrease long waiting lists of patients.
- ✓ Stakeholders and non-governmental organizations (NGOs) focused on enhancing public health outcomes could leverage the findings of this study to increase the availability and accessibility of speech therapy services. Additionally, they may utilize the research to strengthen the capabilities and expertise of speech-language pathologists (SLPs) and other healthcare professionals involved in providing these essential services to the community.
- ✓ Training for health care providers should be addressed to all health facilities.

To Yekatit 12 Medical College Hospital

- ✓ Monitoring/Supervision should be made to all departments for routine referral process to speech therapy services.
- ✓ To incorporate SLPs in multidisciplinary rounds, in patient management and interdisciplinary consultation activities routinely.
- ✓ Planning to increase number of SLPs by employing additional experts
- ✓ Strengthening the unit to be a department and opening of undergraduate program in SLP.

To Healthcare Providers and SLPs

- ✓ Health care providers should practice collaboration with SLP in patient care.
- ✓ SLPs should strive to promote their unit's activities and updates using different platforms of social medias created by the College officials.

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Appendix

Annex 1. Consent form

Annex I Participant Information sheet and informed consent

I am Rahel Yohannes from Addis Ababa University. I am collecting data for the study to be conducted on Knowledge, Attitude and Practice of Healthcare Providers working at Yekatit 12 Hospital towards Speech Therapy Service given at the center.

Procedure: I would like to invite you to take part in a research study. The purpose of this study is to collect data related to you and your work experience.

Risk: Participating in this research may involve some discomfort, primarily due to the time commitment required. However, there are no significant risks associated with your participation. Your responses provide valuable input that can help identify gaps and opportunities to improve holistic healthcare services.

Benefits: While your direct participation in this research may not provide you with any personal benefits, the results of the study could indirectly benefit you by helping to create a smoother, more efficient work environment. Additionally, the research has the potential to provide direct benefits to patients. It's important to note that you will not receive any incentives or payments for taking part in this research. Your participation will be based solely on your full acknowledgment and agreement with the objectives of the study

Confidentiality: The data collected through this research project will be kept private and confidential. Any information about you that is gathered will be stored using a code number instead of your name. You have the full right to refuse participation in this research or withdraw at any time.

Person to contact: In case you need to get additional specifics, you can call/email the principal investigator of this study, Rahel Yohannes through this mobile phone number 0913012674 and email address richyohsp@gmail.com

Given the details provided, are you agreeable to take part in the research project? If so, please indicate your consent by selecting 'Yes'.

Signature -----

Date -----

Declaration of consent for Informed Voluntary

The information regarding my participation in this study has been made clear to me. I have been given the opportunity to ask questions, and they have been answered to my satisfaction. I am voluntarily choosing to participate in this study. I understand that my records will be kept private and confidential. I also understand that I can choose to withdraw from the study at any time, without any consequences. I understand that my participation, or decision not to participate, will not affect me in any way.

If I agree to participate in this study, I will provide my signature below.

Signature ----- Date -----

Annex 2. Questionnaire:

Knowledge, Attitude, and Practice among Health Care Providers at Yekatit 12 Hospital towards Speech Therapy Services at the unit

PART I socio-demographic characteristics: -

Instruction: Carefully read each question. For questions that provide multiple choices, circle the option that best answers the question. For questions that require you to fill in a blank, write your answer in the space provided.

1.1. Gender: A. Male

B. Female

1.2. Age group:

1. 20-30

2. 31-40

3. 41-50

4. 51 and above

1.3. Work Position

A. Doctor-GP

B. Doctor- Specialist/Subspecialist

C. General Nurses

D. Midwifery/psychiatry Nurses

E. Physiotherapist

F. Other (Specify: _____)

1.4. Specialty (if applicable):

1. Internal Medicine

2. Pediatrics

3. Neurology

4. Plastic Surgery

5. Other (Specify: _____)

1.5 Department/Unit assigned at currently:

1.4. Experience in Years:

1. >1

2. 1-5

3. 6-10

4. >= 11

5. Pressure points

6. Drugs

7. Stuttering/Stammering therapy

8. Physical exercise

2.8 Have you received any formal training or education on speech therapy during your career?

1. Yes

2. No

2.9 Do you use references to stay updated on speech therapy services?

1. Yes

2. No

2.10 If your answer is yes for above question, what resources do you currently use to stay updated on speech therapy practices? (Select all that apply)

1. Professional journals

2. Workshops and seminars

3. Online courses

4. Interactions with speech therapists

5. Other (please specify)_____

2.11. Do you understand about the importance of speech therapy in patient care/ recovery?

1. Yes

2. No

2.12 If your answer for above question is yes, how do you think it helps?

Part III: Attitude towards Speech Therapy Services

Instruction: Read the questions attentively and mark your chosen response.

Carefully read the attitude questions and encircle your choice.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Speech therapy is an important and integral part of patient care and essential service in a hospital setting.					
2. The main benefits of speech therapy services in a hospital is for Patients in need.					
3. There is a need for more awareness and education among healthcare providers about speech therapy services.					

4. There are NO perceived barriers exist in implementing speech therapy/referring patients to speech therapy services.					
5. There are NO any misconceptions or myths about speech therapy among healthcare professionals.					
6. Referring patients from physicians to SLP is necessary					
7. Speech therapy services are effective in improving patient outcomes					
8. Speech therapy is adequately integrated into the healthcare services provided at Yekatit 12 Hospital					
9. Will you recommend for your family members to become SLP?					
10. Do you think that SLP department should be available in all Hospitals?					

Part 4: Practice Regarding Referring Patients for Speech Therapy Services

Instruction: Read the questions attentively and mark your chosen response.

4.1. Have you referred a patient to the speech therapy unit at Yekatit 12 Hospital within past 1 year?

1. Yes

2. No

4.2. If yes, how often do you refer patients to speech therapy services?

1. Always

2. Often

3. Occasionally

4. Rarely

5. Never

4.3. If yes for 4.1, what factors influenced your decision to refer the patient for speech therapy?

1. Severity of speech disorder

2. Patient's willingness to undergo speech therapy

3. Availability of speech therapy services

4. Other (please specify)

4.4. If yes for 4.1 which cases have you referred yet? Select all that you referred.

PART 5: - Probing/ Additional Comments for all department heads

5.1. Please share any additional thoughts, comments, or suggestions regarding speech therapy services at Yekatit 12 Hospital.

5.2. What suggestions do you have for improving awareness and utilization of speech therapy services among healthcare providers?

5.3 What suggestions do you have for improving the integration of speech therapy services into patient care at Yekatit 12 Hospital?
