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DEPARTMENT OF SPECIAL NEEDS AND INCLUSIVE EDUCATION

THE USE OF ALTERNATIVE COMMUNICATIONS FOR PATIENTS ADMITTED TO INTENSIVE CARE UNIT AND EMERGENCY WARD AT ST' PAULOS HOSPITAL

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Addis Ababa, Ethiopia

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DECLARATION

I, the undersigned, affirm that the thesis titled " The use of Alternative Communications for patients admitted to Intensive Care Unit and Emergency ward at St' Paulo's hospital, Addis Ababa, Ethiopia" is my original work. All the sources of information used in its preparation have been duly acknowledged.

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Acronym

AAC	Augmentative and Alternative Communication
CCN	Complex Communication Need
CEO	Chief Executive Officer
ICU	Intensive Care Unit
LTACH	Long Term Acute Medical Care Hospital
PI	Principal Investigators
SPSS	Statistical Package for Social Science

Abstract

*Effective communication is essential in healthcare settings to ensure favourable patient outcomes and minimize avoidable adverse events. Augmentative and alternative communication (AAC) strategies play a crucial role in supplementing or replacing verbal communication, particularly for intubated patients. However, communication barriers persist in healthcare systems, impacting patient care and psychological well-being. Recognizing and addressing these barriers is vital to improving patient outcomes and reducing healthcare costs. So the main objective of this research is to explore and describe the existing communication modalities used by health professionals believe regarding the use of alternative communication or AAC into patient care in ICU and Emergency units of St. Paulo's Hospital, Addis Ababa, Ethiopia. While conducting the research, **a** convergent mixed research design was employed to collect data at St. Paul's Millennium Medical College. The qualitative phase utilized a phenomenological approach for sampling 14 participants, while the quantitative phase employed cross-sectional method for sampling 69 observational representatives. Data analysis was facilitated using NVivo for qualitative data and SPSS version 22 for quantitative data. The research revealed that the prevalent communication methods among health professionals was conducted with head nodding and yes/no gestures being the most common. However, the success rates of these methods varied, with writing demonstrating 100% success but limited (only 15.9%) usage. Positive communication behaviours such as improving patient comprehension were noted, but gaps in suggesting communication strategies to patients were observed. Health professionals expressed favourable attitudes towards integrating alternative communication modalities, despite their limited usage at this moment. Generally, this study highlights the prevailing communication methods and their varying degrees of success among health professionals in the ICU and Emergency units at St. Paulo's Hospital. While positive communication behaviours were evident, there remains a need to address gaps in suggesting communication strategies to patients. Based on the finding, the favourable attitudes towards alternative communication modalities suggest potential for enhancing patient care in these settings. It is recommended that targeted interventions and training programs be developed to improve communication strategies, thereby enhancing overall patient care and outcomes in the ICU and Emergency unit.*

CHAPTER ONE

INTRODUCTION

1.1. Background of the study

Augmentative and alternative communication (AAC) is a set of tools and strategies that an individual uses to solve every day communicative challenges (Liew et al., 2022). It is Augmentative when used to support speech that is already present and it is alternative when speech is missing or non-functional, or both. It can incorporate both assisted and unaided communication modalities. Body posture, facial expressions, and gestures are categorised as unaided AAC. A communication board with symbols (e.g., communication books), computers, mobile devices, or tablet devices with symbols that generate speech by artificially produced or recorded natural (digitized) ways are examples of assisted modes, which might require some kind of external support (Bernadt, 1995).

In the other hand, Communication can be defined as information transferred via a channel with a specific goal from a source to a recipient and effective communication can be defined as verbal speech or other methods of relying information in order to get a point across (Plessis, 2010). So, Depending on the situation and the other person, everyone uses a variety of communication channels. AAC includes a broad spectrum of strategies that either supplement or replace verbal communication (Liew et al., 2022).

Having effective communication is crucial while providing healthcare. Every day in acute care practice, there is an opportunity to display advanced communication abilities and one of the most important clinical skills in critical care medicine and a cornerstone of ethical medicine is effective communication with patients, physicians, and their families (Gauntlett & Laws, 2008). Without it, there would be Unfavourable patient outcomes, an increase in healthcare costs and the calibre of medical care would deteriorate. Patient and healthcare system communication must be reciprocal for there to be effective interaction. The delivery of care is jeopardized if there is a lack of clear understanding of the information given by the health care professional or the patient (Plessis, 2010; Ratna, 2019). Physical and psychological suffering can be lessened by enhancing or improving the dialogue between medical professionals and patients who are suffering from

serious illnesses (Tulsky et al., 2017). These exchanges can have an impact on the patient's long-term psychological consequences. So the methods and tools that intubated patients can use to communicate should also be known to medical personnel (Gauntlett & Laws, 2008).

Patients may face a sudden onset of severe expressive difficulties which can be caused by musculoskeletal ailments, neurologic diseases, traumatic injuries, or the introduction of life-saving devices that interfere with the ability to produce speech naturally. Natural speech production may also be hampered by respiratory failure, spinal cord injuries, closed head injuries, and postoperative conditions such as head and neck cancer and others requiring tracheostomy, intubation, or mandibular wiring (Fried-Oken et al., 1991; ten Hoorn et al., 2016). Based on studies, these patients classified their communication needs into four categories: pain, breathing difficulties, need for suction, and need to go to the bathroom, which were deemed to be the most critical needs, followed by the need to talk about their psychosocial needs, which included feeling alone and afraid. The most popular methods of communication were writing, mouthing words, pointing, and using hand signs to make movements (Koszalinski et al., 2016; ten Hoorn et al., 2016).

Most patients who had faced sudden expressive difficulties had stated that, they had the most trouble communicating with nurses, then doctors (Koszalinski et al., 2016; ten Hoorn et al., 2016). So, they may need to find other ways to communicate beside the current techniques, such as Augmentative and Alternative Communication (AAC) methods, which include all of the ways that someone communicates besides talking. AAC is used by some people all their lives while other might only use it temporarily, such as after surgery or in critical care, when they are unable to speak (Bernadt, 1995).

In a study done in a rehabilitation institute of Oregon, Portland regarding feedback on AAC intervention Patients requested that the need of in service training for all ICU staffs with AAC techniques(Fried-Oken et al., 1991). In a different study that examined various scenarios, all of the cases discussed emphasized the importance of giving nurses and other caregivers more education on how AAC strategies can be used to support patient-provider communication and the need for increased caregiver training throughout their intervention (Marshall & Hurtig, 2019).

In order to improve patient outcomes and cut down on wasteful expenses related to avoidable adverse events, communication barriers must be removed. We need to establish and maintain communication practices throughout the hospital. Supporting patients with complex communication need (CCN) should be the ultimate aim, even if obstacles may change and the process of creating a culture of communication may be different.

1.2. Statement of the problem

A wide spectrum of people with significant medical conditions requiring intensive, specialized care over an extended length of time are served by long-term acute medical care hospital (LTACH) units. In LTCH, patients are either permanently or temporarily unable to meet all of their communication demands through natural speech (Fager et al., 2014). Based on my experience a person may loss his ability to express his need, without any cognitive impairments, due to different reasons. Some of these reasons are being intubated or having a tracheostomy after some surgery or due to some disease condition. These situation become frustrating when patients are unable to express their needs or when others are not understanding their will.

In our countries circumstance, the fear and restlessness may arise because some patients get intubated or have the procedure done with their families consent while the patients are unconscious due to their disease condition. The time laps while the patient unable to do formal and meaningful communication and these might depend on the severity of the illness or time staid by having altered state of consciousness. In these times when discussions do occur, they frequently involve some of the most delicate deliberations one can imagine, as they deal with the possibility of immediate survival or an impending risk of death (Gauntlett & Laws, 2008).

To understand these patients, nurses and doctors have been trying different methods, but most patients are restless, some also might hurt themselves, when they try to express their need. However, these insufficient communications can have an impact on the patient's long-term psychological consequences. So the methods and tools that intubated patients can use to communicate should also be known to medical personnel (Gauntlett & Laws, 2008). Studies in other countries had also stated the urgent need to improve quality of communication in these areas through a broad range of research that covers communication skills, tools, patient education, and models of care (Tulsky et al., 2017).

In addition to that in our country, most health service institutions seem to be more concerned about the life saving situations and do not give much concern regarding communication needs and the provision of communication equipment's like AAC materials in the hospital setting. Even healthcare providers don't have enough training on different methods of communication for patients with complex communication needs.

A study done at St Paulo's hospital reported that 22.1% of surgical patients admitted to ICU (Abebe et al., 2020). It shows that beside the patients admitted to ICU due to other medical problems, significant number of surgical patients can be admitted to ICU after their procedure is done and most of the time they are intubated but cognitively awake. Another study done in Addis Ababa public referral hospitals showed that intubated patients who are agitated and physically restrained have high tendency of self extubating. The study discussed that the inability to express themselves by moving their hand freely and gesture increase the patients anxiety (Minda et al., 2022). Self extubation has been identified as the main reason for prolonged ICU stay in a study done south part of Ethiopia (Mohammed et al., 2017). However, sedatives will be used in order to prevent agitation related harms. But, Sedation for an extended period of time can have major negative consequences, such as impaired cognitive function or loss of consciousness which in turn causes prolonged mechanical ventilation, prolonged hospital stays, higher expenses, and mortality (*Elsevier Drug Class Overview | Benzodiazepines*, n.d.; Mohammed et al., 2017). If patients can communicate sufficiently the anxiety and the incidence of such problems can decrease. In general in our country there are no protocols that indicate the use of AAC for patients in communication needs, which in turn causes limited services given in the health institutions working system. Additionally, I haven't found any study that shows the present communication methods used by health professionals and the perception of health professionals regarding the current communication methods in our country.

Hence, the general objective of the study is to explore the existing communication modalities used by health professional and to investigate these professionals believe regarding the use of alternative communication or AAC into patient care in ICU and Emergency units of St. Paulo's Hospital, Addis Ababa, Ethiopia with the following specific Objectives:

1. Assess the existing communication methods used by health professionals with their patients in ICU and Emergency units.

2. Assess the successfulness of communication methods used by health professionals with their patients in ICU and Emergency units.
3. Assess the quality of communication of health professionals with their patients in ICU and Emergency units.
4. Explore the perspective of health professionals regarding communication with their patients and the use of communication alternatives into patient care in ICU and Emergency units.

1.3. Significance of the study

Once this research is completed, we will have a thorough grasp of the current communication strategies utilized by medical staff in emergency and critical care units with patients who have complicated communication needs, particularly those who have undergone tracheostomy and intubation. Furthermore, we can learn about health professionals' perspectives on the application of different communication modalities. These will assist us in identifying our gaps through a comparison of our results with solutions tested in other global locations. Inadvertently, this enables patients to have a supportive communication partner during their hospital stay, even in cases where their ability to express themselves verbally is impaired.

It also help policy makers, health professional, peoples involved in developing curriculum and the ministry of health to introduce different methods communication for different patients, provide materials necessary for communicating, provide trainings for staffs who had close contacts with clients and students on their way of graduation for health service delivery in different hospital settings. This will make our health delivery places a better place with patient centred care.

In general, I am doing this study to assess the current methods of communication used by health professionals. Because it will give us a clue about the presence of effective communication between critical patients or patients with current expressive difficulties and health professionals; and so will be a baseline for responsible bodies if there is a need for distribution of assistive devices in these health practice areas in our country.

1.4. Scope of the study

The study titled "The Use of Alternative Communications for Patients Admitted to Intensive Care Unit and Emergency Ward at St. Paulos Hospital, Addis Ababa, Ethiopia" aims to explore and describe the existing communication modalities used by healthcare professionals in the ICU and emergency units. It seeks to assess the success and quality of these communication methods and to understand the perspectives of healthcare professionals regarding the integration of augmentative and alternative communication (AAC) into patient care. The research employs a convergent mixed-methods design conducted at St. Paul's Millennium Medical College. In the qualitative phase, a phenomenological approach was used to sample 14 participants, while the quantitative phase employed a cross-sectional method to sample 69 observational representatives. Data were analysed using NVivo for qualitative data and SPSS version 22 for quantitative data. The study highlights the prevalent communication methods among healthcare professionals, such as head nodding and yes/no gestures, and evaluates their varying degrees of success. The research found that writing, although highly successful, was underutilized. Positive communication behaviours were noted, yet there were gaps in suggesting communication strategies to patients. The favourable attitudes towards AAC among healthcare professionals suggest potential for enhancing patient care through targeted interventions and training programs aimed at improving communication strategies in ICU and emergency settings.

1.5. Operational definition for quantitative study

Success Rate Method for Communication

1. **No Communication Response When One is Obligated**
    - **Definition**: No response is given when communication is necessary.
    - **Success Rate**: 0% success (complete failure in communication).
2. **Message Attempted but Not Conveyed or Abandoned**
    - **Definition**: An attempt to communicate is made, but the message is not conveyed or is abandoned.

- **Success Rate**: 25% success (minimal success, as there is an attempt but no effective communication).

3. **Message Partially Conveyed**
    - **Definition**: The message is partially conveyed, requiring the partner to interpret or clarify to obtain partial meaning.
    - **Success Rate**: 50% success (moderate success, as part of the message is communicated but requires additional effort for full understanding).
4. **Message Conveyed with Adequate Partner Response Indicating Comprehension of Basic Meaning**
    - **Definition**: The message is conveyed and the partner's response indicates comprehension of the basic meaning.
    - **Success Rate**: 75% success (high success, as the basic meaning is understood, but may lack full detail).
5. **Message Conveyed with Elaborated Partner Response Indicating Complete Comprehension of Entire Message**
    - **Definition**: The message is conveyed fully and the partner's response indicates complete comprehension of both the basic idea and details.
    - **Success Rate**: 100% success (complete success in communication).
6. **NA = Message Did Not Obligate a Response**
    - **Definition**: The message does not require a response.
    - **Success Rate**: Not applicable (no assessment of communication success needed).

Quality- The quality of health professional's communication during interactions with patients in the ICU and Emergency units at St. Paulo's Hospital is assessed by comparing positive, facilitative behaviours to negative, communication-inhibiting behaviours over a three-five minute session.

- Positive behaviours, such as asking tagged yes-no questions, providing response choices, physically assisting patients, suggesting modes of communication, repeating the patient's response, augmenting comprehension, greeting patients by name or touch, asking open-ended questions when the patient has a method to respond, and making eye contact, contribute significantly to effective communication. These actions enhance clarity, support, and engagement, fostering a positive and responsive interaction environment.

- Conversely, negative behaviours, such as failing to gain the patient's attention before interaction, not providing necessary assistance, asking unanswerable questions, ignoring the patient's communication attempts, not allowing time for the patient to respond, interrupting the patient's message, self-talking or mumbling, speaking too loudly, and not maintaining eye contact, impede communication. These behaviours can cause confusion, frustration, and a breakdown in effective communication.

CHAPTER TWO

LITERATURE REVIEW

2.1. Communication methods used

In a retrospective, descriptive study, published by American association of critical care nurses from a total of 694 communication episodes between patients and healthcare providers, a clinically significant proportion of patients in the intensive care unit who received mechanical ventilation The main means of communication were writing (n = 26), gestures (n = 77), mouthing words (n = 148), and head nods (n = 342). During their critical illness, two patients briefly employed speaking valves; there is no documentation of the use of an electro larynx or picture-letter boards. It was also noted that some patients (n = 13) spoke and wailed "above" the tracheostomy. Furthermore, just a few reports (n = 3) mentioned using eye blinks as a communication technique. Face expressions, including a grin, laugh, cry, or grimace, were primarily characterized as add-ons to the documenting of other nonverbal cues (n = 20) (Happ et al., 2004).

Another descriptive observational study that evaluates the interaction between nurses and patients in the intensive care unit also revealed that, of 1693 communication acts, very little to no alternative communication was used in addition to the natural ways that nurses communicate, such as head nodding, gesturing, mouthing words, and making facial expressions. Following head nods and yes/no signals, expressive nonverbal gestures and mouthing words were the next most common ways to communicate. There were at least twenty written acts completed. There was no indication that communication boards, pictures, or the alphabet were being used. Therefore, it is obvious that this demographic needs access to assistive communication tools and resources. (Happ et al., 2011).

A descriptive exploratory pilot study was carried out to evaluate the communication needs of nonspeaking hospitalized postoperative head and neck cancer patients in an urban tertiary care facility in the United States' Southeast. When 11 patients were surveyed regarding their communication tactics, the following information was found: n = 8, or 72.7% of them, wrote on loose paper, a tablet, or a notepad. Patients who reported mouthing words and pointing or

making hand motions made up a smaller fraction (n = 3, 27.2%). A considerable proportion of participants (36%) reported use multiple communication techniques, including hand signals, writing, gesturing, and mouthing phrases (Rodriguez & Blischak, 2010).

2.2. Quality and success of communication

A descriptive observational study done at university of Pittsburgh medical centre, Pennsylvania to evaluate the interaction between nurses and patients in the intensive care unit also revealed that, of 1693 communication acts, keeping eye contact with the patient was the most often performed positive nursing act. Over one-third (37.7%) of communication interactions regarding pain were unsuccessful, despite the fact that most of them (>70%) were effective. There was little to no usage of assistive communication items, such as writing supplies, word boards, or the alphabet, and helpful communication tactics were unusual. (Happ et al., 2011).

According to an observational research conducted at Iran's heart surgery intensive care unit, out of 175 exchanges between nurses and patients receiving mechanical ventilation, the majority of nurses were satisfied (45.7%), but none of the nurses (0%) were completely satisfied.(Momennasab et al., 2019)

2.3. Communication barriers

The communication abilities and experiences of 16 critical care nurses with patients and their caregivers were assessed in a qualitative descriptive study done South Korea, Dongguk University and Seoul, Asan medical centre. Three themes have been found from two focused group discussions and four individual in-depth interviews. One of the theme was Facing unexpected communication difficulties which include factors like Hesitant to provide physical comfort because Participants were not familiar with using non-verbal communication, Mechanical ventilation hindering communication with the patient due to Participants expressed difficulty in communicating with patients in ways other than verbal communication, Lack of experience and a mismatch between theory and practice which means Participants have learned the importance of communication during training; however, they had trouble appropriately applying the learned concepts in their workplace and Urgent workplace that de prioritizes communications, in which they could not idly stay around to communicate with one patient

because another required immediate assistance. The second theme was Learning through trial and error or picking up knowledge via experience which state about Finding out which communication style is better suited for patients and their families and Knowhow communication can be learned through persistent effort. And third theme describe about realizing that communication experiences are crucial for caring. It is imperative to establish and employ AAC in critical care, as the study's conclusion indicates that patients who are unable to communicate are more likely to receive subpar care (Yoo et al., 2020).

A qualitative systematic study which reviewed 12 studies to assess the effectiveness of nurse communication with patients with complex communication need regarding the use of AAC from the perspective of nurses, patients and caregivers perspective reported that lack of knowledge and training about AAC, attitudinal barriers like nurses low concern about their patients communication need and their belief as it is time consuming, lack of communication tools, distorted level of cognitive and language impairment of the patient and lack of continuity of assigned nurses as a potential barriers for effective communication. It also reported that giving nurses training and gaining experience by working with patients with disabilities, giving time to communicate with the patient until it become effective, asking for help from others, handover about the method of communication with the patient for the shift nurse, presence of AAC tools and strategies, presence of quiet environment and presence of relatives as a support or a solution for effective communication (Finke et al., 2008).

A qualitative study conducted during the COVID-19 pandemic in four hospitals in Cyprus examined the strategies used by nurses to communicate with conscious intubated patients and the obstacles they face. The study revealed that nurses report on the mental, emotional, and cognitive function of their patients; the medications they take for pain; their personal attitudes regarding willingness and prioritizing tasks; the ICU environment, including noise and light; and the lack of assistive materials and staff knowledge and training as barriers to communication (Kyranou et al., 2022).

A pilot study designed by north central London critical care network speech language therapy group to examine the pattern of current ICU communication with in each ward, based on nurses perception sedation, endotracheal tube, patient motor weakness, the need for brief explanation, not being good at lip reading, inability of patients to write, language, level of consciousness, lack

of continuity in nursing care, the room disturbance and lack of communication aids are the possible barriers for communication. They also stated that continuity of care, receiving advise from speech language therapist, adding training sessions even as part of general nursing training and using communication devices as reflective insight for better communication (Magnus & Turkington, 2006).

2.4. Perspective of health professionals towards the use of alternative communication

Health teams' understanding of AAC implementation in critical care was reported in three themes by a qualitative study conducted in five large hospitals in Denmark's ICUs. First, caring oncology reported that almost all professionals demonstrated a high level of motivation and commitment to the idea of using AAC and explained how it could improve their communication; second, cultural belief that the professionals focus on treatment and life preservation, even though they believed that communication could help patients' psychology they don’t give much concern about it. Finally, there was behaviour that indicated staff members chose to ignore signs of communication out of frustration that when patients tried to communicate, professionals were unable to understand them. The staffs also provided different reasons for not using AAC devices after they got training about it. (Handberg & Voss, 2018)

CHAPTER THREE

METHODOLOGY

3.1. Study design

Convergent/ parallel method of mixed research design was used to explore the existing communication modalities used by health professional and to investigate these professionals believe regarding the use of alternative communication or AAC into patient care in ICU and Emergency units of St. Paulo's Hospital, Addis Ababa, Ethiopia. The quantitative and qualitative methods are used equally. The National Institutes of Health state that in order to capitalize on each discipline's advantages, mixed methods research deliberately blends or integrates rigorous quantitative and qualitative methodologies.(Dawadi et al., 2021)

3.2. Study area

The study was conducted in Addis Ababa town, **St Paulo's Millennium Medical College**. It was selected as a study location because it is the first hospital in Ethiopia and the first in Ethiopia to implement one-to-one nurse to patient care in an intensive care unit. It is governed by a board under the Federal Ministry of Health. The college has more than 2800 clinical, academic and administrative and support staffs that provide medical specialty services to patients who are referred from all over the country, teaching medicine and nursing students and doing basic and applied researches. While the inpatient capacity is more than 700 beds, The College sees an average of 1200 emergency and outpatient clients' daily. The hospital has 13 beds in ICU and 25 beds in emergency ward. In each ward there is more than 60 health professionals or nurses and doctors. (*Saint Paul's Millennium Medical College*, n.d.)

3.3. Study participants and research setting

3.3.1. Sampling technique and sample size

Qualitative Data

For the qualitative aspect of the study, a phenomenological approach was employed to deeply explore the lived experiences of health professionals. Purposive sampling was used to select 14 participants who met specific inclusion criteria, ensuring their relevance to the study's focus. The

sample comprised 6 nurses, 6 physicians, and 2 respiratory therapists in order to determine the current communication modalities, the viewpoint of the experts, the utilization of communication alternatives, and the solution to establish better communication. The minimum and maximum duration of the interview were 15 and 25 minutes, respectively. Notably, nurses and respiratory therapists with less than six months of experience, as well as physicians or residents on their first attachment in the ward, were excluded. This targeted selection allowed for the collection of rich, detailed data from individuals with significant and relevant experiences.

Quantitative Data

For the quantitative aspect, a cross-sectional sampling method was applied. A total of 69 observational samples were collected. Health professionals for this stage were chosen through simple random sampling, ensuring an unbiased representation of the larger population. Similar to the qualitative phase, nurses and respiratory therapists with less than six months of experience, and physicians or residents on their first ward attachment, were excluded. This method ensured that the quantitative data were comprehensive and generalizable, providing a broad understanding of the phenomena being studied.

Inclusion and Exclusion criteria

- **Inclusion criteria**

- Professional Nurses, working for at least six months in intensive care unit of St Paulo's hospital, Addis Ababa, Ethiopia
- Professional Nurses, working for at least six months in emergency unit of St Paulo's hospital, Addis Ababa, Ethiopia
- Respiratory therapists working for at least six months in emergency unit of St Paulo's hospital, Addis Ababa, Ethiopia
- Respiratory therapists working for at least six months in intensive care unit of St Paulo's hospital, Addis Ababa, Ethiopia
- Physicians working in emergency unit of St Paulo's hospital, Addis Ababa, Ethiopia

- Physicians working in emergency unit of St Paulo's hospital, Addis Ababa, Ethiopia

➢ **Exclusion criteria-**

- Physicians (Residents) who are having their unit attachment for the first time
- Nurses and respiratory therapists who have worked in the unit for less than 6 months (Leonard et al., 2022)
- Health professionals who decline to participate(including professional decline to participate due to their disabilities)

3.4. Data collection tools and procedure

Qualitative Data Collection

Qualitative data were collected using semi-structured interviews aimed at exploring in-depth insights into communication modalities used by health professionals. The interview questionnaire consisted of 12 semi-structured questions which addresses mainly about communication methods, barriers to communication, and professional's perspective about the use of AAC materials during communication. Including socio-demographic inquiries, the interview contains a total of 20 questions overall. The interviews were conducted using an interview guide initially developed in English and subsequently translated into Amharic to accommodate non-English speakers. To ensure clarity and accuracy, a back-translation process from Amharic to English was conducted. This methodological approach facilitated a nuanced exploration of participants' perspectives and experiences regarding communication practices in healthcare settings.

Quantitative Data Collection

Quantitative data collection employed a checklist comprising 31 items including the socio demographic data. Eighteen of them designed to assess the quality of communication behaviours. This checklist included 9 positive behaviours such as asking tagged yes-no questions, providing response choices, physically assisting patients, suggesting modes of communication, repeating the patient's response, augmenting comprehension, greeting patients by name or touch, asking

open-ended questions when the patient has a method to respond, and making eye contact, and 9 negative behaviours, such as failing to gain the patient's attention before interaction, not providing necessary assistance, asking unanswerable questions, ignoring the patient's communication attempts, not allowing time for the patient to respond, interrupting the patient's message, self-talking or mumbling, speaking too loudly, and not maintaining eye contact. To evaluate the overall quality of interactions the sum of the positive behaviours were tailed with the sum of the negative behaviours. Additionally, 7 checklist points were used to assess the types of communication modalities utilized and their success rates. Each observational sample, captured using the checklist, involved 3- 5 minutes of observation per individual. This systematic approach provided structured insights into the prevalence and effectiveness of communication strategies employed by healthcare professionals in ICU and Emergency units at St. Paulo's Hospital.

3.5. Data processing and analysing

The data analysis process for this research involved both qualitative and quantitative methodologies, aimed at comprehensively understanding the communication practices and challenges faced by health professionals in the ICU and Emergency ward.

For the qualitative analysis, the initial step involved transcribing all interviews and observational notes verbatim. These transcripts were then organized and manually coded using thematic analysis to identify significant patterns and recurring themes. The researcher read through the transcripts multiple times to ensure a deep familiarity with the data. Through this process, four main themes emerged: professionals' focus while providing care for the patient, the current status of communication, barriers to communication, and potential improvements for current communication practices. Each theme was further divided into categories to provide detailed insights into specific aspects of the themes. For instance, the theme of "Professionals' focus while providing care for the patient" included categories such as basic nursing care, medical care, basic respiratory therapy, and patient status-focused care. Representative quotations from the respondents were selected to illustrate each theme and category, providing rich, qualitative insights into the professionals' experiences and perceptions.

The quantitative analysis began with the systematic recording of observations of health professionals' interactions with patients, resulting in a total of 69 observations. Descriptive statistics were used to analyse the demographic data of the respondents, such as professional role and years of experience, providing an overview of the sample population. Frequency counts and percentages summarized the data on communication behaviours and methods observed. Positive and negative communication behaviours were identified and categorized; positive behaviours included actions like augmenting patient comprehension and making eye contact, while negative behaviours included asking questions patients couldn't answer and speaking too loudly. The frequency of each behaviour was calculated to determine the prevalence of positive and negative communication practices among the health professionals. The success of various communication methods—such as yes/no signs, mouthing words, gestures, facial expressions, and writing—was evaluated based on their effectiveness in conveying messages. Communication success was categorized as fully successful, partially successful, or unsuccessful, and statistical analysis determined the success rates of each method. This combination of qualitative and quantitative analysis provided a holistic understanding of the communication practices, challenges, and potential improvements in the ICU and Emergency ward settings.

3.6. Ethical considerations

The research study adhered to a stringent ethical protocol to safeguard participants' rights and well-being. Ethical clearance was obtained from the Department of Special Needs at Addis Ababa University, ensuring compliance with institutional ethical standards. Formal communication was established with the CEO of St. Paulo's Hospital through a letter from the Department of Speech and Language Therapy, securing institutional permission. Participants were informed about the study's purpose, benefits, and their rights, including anonymity and the right to refuse participation. Both written and verbal consents were obtained, emphasizing voluntary participation. Confidentiality was rigorously maintained, with data securely stored and anonymised to protect identities. The study respected the dignity, integrity, and privacy of each health professional, ensuring their participation did not expose them to harm or discomfort. This comprehensive ethical framework enhanced the study's credibility and validity by fostering a trustworthy and respectful research environment.

CHAPTER FOUR

RESULT

4.1. Qualitative Result

Demographic data

Six of the fourteen responders were nurses, six were doctors, and two were respiratory therapists. The doctors were residents in various specialties: two practiced emergency and critical care, three practiced anesthesia and critical care, and one practiced internal medicine. The respondents ranged in age from 25 to 32, with 25 being the minimum. The interviewees were token from intensive care unit and emergency ward.

Table 1 Socio demographic data

	age	profession	specialty	years of experience	current working ward
respondent 1	28	nurse	-	3	ICU
respondent 3	27	nurse	-	4	Emergency
respondent 4	27	nurse	-	4	Emergency
respondent 5	25	nurse	-	1	Emergency
respondent 6	27	nurse	-	4	ICU
respondent 9	27	nurse	-	5	ICU
respondent 10	28	doctor	anesthesia and critical care	R2	ICU
respondent 12	29	doctor	internal medicine	R3	ICU
Respondent 2,	29	doctor	anesthesia and critical care	R2	ICU
respondent 7	27	doctor	emergency and critical care	R2	Emergency
respondent 8	29	doctor	anesthesia and critical care	R3	ICU
respondent 11	28	doctor	emergency and critical care	R2	Emergency
respondent 14	30	respiratory therapist	-	1	ICU
respondent13	31	respiratory therapist	-	1	Emergency

The physicians' experience is expressed according to their residency year; therefore, those who are R2 are having their second or above attachment in the ward, and those who are R3 are having

their third or above attachment. The minimum years of experience for nurses in the ICU or Emergency ward is one year, and the maximum is five years.

Regarding the objective the researcher had developed 4 theme

Theme 1; professionals focus while providing care for the patient

In this theme we can see the perspective of health professionals about their concern regarding communication with their patients. All of the respondents had mentioned their main focus while providing care for their patients as the care that is expected based on their professions. Which in return can show us they give low concern about communication due to different reasons. The researcher had divided this theme into 4 main categories.

Category 1: basic nursing care – in this category the researcher has included nurse professional's responses that had been listed as the different procedures that they do for the patients while giving care for them. Medication administration, suctioning, positioning, emergency care, feeding and documenting were the most prevalent responds.

One of the respondents had stated that "*Suctioning, feeding, monitoring, medication administration and documenting what have been done for the patient are my main focus areas."*

Category 2: medical care- in this category the researcher had included the response of residents which are evaluating, clerking, diagnosing, treating and updating the patient status as their main focus area while providing care for their patient.

One of the physician who was working in the ICU has responded that *"My main focuses areas are evaluation, taking history and physical examination, ordering investigation, and then ruling out the diagnosis and giving management based on the diagnosis."*

Category 3: basic respiratory therapy- two of the respiratory therapists had mentioned that the care they give as

Respondent 1 **"***Respiratory support, oral care and chest therapy are my main focuses"*

Respondent 2 "*I give a compassionate cardiopulmonary care*"

Category 4: treating patient status- in this category respondents were more focusing about patient centred care and had mentioned their care based on the patient status which includes focus on assessing the GCS of the patients and treating based on it, treating what the patients are complaining including pain, giving psychological and financial support, and providing comfort were the main focus areas mentioned.

One of the nurse respondent had stated that "*I paid attention to what kind of patient I have. Is he conscious or not, how much is the GCS, because the conscious knows what he is asking for, I will fulfil his needs".* A resident had also stated that "*my main focus is mental status assessment, wellness assessment, assessing for comfort and pain*."

Another nurse also stated that "*Beside administering medication and performing procedures, I providing emotional and psychological support trough effective communication.***"**

Theme 2: current status of communication

In this them the researcher developed 3 main categories based on the professionals believe of their ease of communication, the current communication modalities they are using including advices from others and if they had training previous about communication.

Category 1: ease of communication- only one of the respondents had stated that he had never face difficulty while trying to communicate with his patients.

On the other hand one of the respiratory therapist had mentioned that it was hard to communicate with intubated patients he said that "*it is hard to communicate with patients on mechanical ventilation, since most of the patients doesn't respond to you verbally or clearly, I have a hard time knowing if there is a misunderstanding.*"

Thirteen of the respondents rated their ease of communication as easy and satisfactory but all of them had mentioned that they had faced difficulties while communicating with their patients.

"*Although my communication is easy I experience a delay in understanding of them most of the time. For example, when they ask me for an analgesics, it is difficult for me to help quickly. I remember one time my patient was a student and I was able to tell by counting from 1 to 10 to find out if he was a grade 10 student."*

Another respondent had also stated that "*I think it's easy for me, especially if they are not conscious because they don't know many things, so I guess what they need. If they can speak, (communicates) it is a little difficult because they are on a ventilator machine they may not explain what they need and I can't do what I guess because that might not be what they need*"

Category 2: method of communication – 6 of the respondents mentioned that they give a writing material for patients while communicating. All of the respondents included neck movement and yes or no choices as one of their communication modalities. Using sign, facial expression, giving choices and narrowing choices are also other mentioned communication modalities.

One of emergency nurse responded that "*I always use them like yes/no, neck movement, face expression and then I try to guess what they want; Sometimes I use texts."*

Keeping patient's privacy also had been mentioned as one of strategies "*The first thing I always do is keeping the patients privacy while communicating which I believe can make them feel safe then empathy is the next important point. Narrowing down my questions and using writing to communicate."*

Sub category 2.1 – ask advice- except one of the respondent, all of interviewees seek support from different persons when there is difficulty while communicating with their patients.

One of the physicians responded that *"Yes I do receive advice from patients family, supervising staff, nurses and fellow health professionals"*

Patient's family, nurses, colleagues, and supervisors were most mentioned individuals that most respondents seek advice from about their communication or to understand what the patient need while communicating with their patients.

A person who spent much time with the patient had also been mentioned by four of the respondents. "*Yes most of the time from the nurses or a person who spent much time with the patient"*

Category 3: previous trainings about communication- Twelve respondents had no training about communication and its method that can be used to make their communication easier with their patients. One respondent had stated that he has a deaf family member so uses the strategies

that he had been taught to communicate with his family member in his work place in order to understand patients on mechanical ventilation.

Another respondent says that she had some training while she was assigned at ICU when she was in private hospital and the training includes that how we should approach this patients and how we should try to understand them despite they can't express themselves.

Theme 3: Barriers to communication

From the data collected the researcher developed factors that can affect communication as

Category 1: patient factor – these factors are mentioned by the respondent as the main barriers of communication which are patients level of consciousness, level of knowledge, anxiety, understanding level, and their disease condition.

"Education and language, health seeking behaviour of patients are the main barriers"

"The main barrier for communication is patient's disease condition, level of consciousness, personal behaviour."

Category 2: **professional and environmental factors:** Professional's emotion, flexibility tiredness, willingness and environmental quietness, privacy, crowdedness and workload, lack of supplies are ideas included in this factor.

"*Professionals boredom, desire, lack of flexibility, environment means like overwork can impact our communication with our patients."*

One of the respondent had also stated that not knowing the patient might be barrier to easy communication. *"Not knowing a patient and their history affects our communication because most of the time if you spend much time with your patient you will get to use what they need and can provide for them."*

"Writing and other technological elements are not available at bed side at least if having writing materials could be possible. So the patients can write their thoughts and we can understand them easily. "

Another physician also stated that *"Alternative means of communication are not available, for example, writing and other technological elements are not available in our environment. Beside this patients level of understanding and professionals willingness to spend time to use different method of communication until they understand each other is another main point."*

Category 3: physical and medication barriers: -the level of sedation the patient is taking, physical restraints and ETT tube by itself are the three barriers mentioned in this category.

One of anaesthesia resident explained that "*ET Tube and the level of sedation the patient is taking are the things that are making our communication very hard"*

Category 4: language difference- language is another main barrier mentioned by the health professionals. Since St Paulo's is a huge referral hospital patients come from different parts of the country. So it is hard to communicate with this patients without having interpreter which is not available all the time.

"Beside the patient's disease condition and the professional personal behaviour having different language does also makes our communication hard. Because sometimes I explain things in another language but the patients doesn't understand me."

Theme 4: what could help the current communication?

Category 1: **Protocol and trainings about how to communicate-** two of the respondents mentioned having clear intubated patient's communication protocols and guidelines could help to make communication much easier. Seven of the respondents had also raise the idea of having a training about communication could help the current communication.

One of them had stated as "*if there is a clear patient communication protocol or guideline about how to interact with these patients I believe our communication could be much easier."* Health professional mentioned that "

Another health professional also stated that "*If alternative communication modality materials could be available and if professionals could get training about any better communication ways our communication might also get better."*

Category 2: **Presence of Alternative communication materials, signs and presence of trained personne**l – from the 14 health professionals 8 of them had mentioned about availability and use of alternative communication modalities could make their communication easier. They also had mentioned some materials that could be categorized as alternative communication materials that could be provided in the units to help their communication with patients. Four of these respondents also mentioned the presence of trained personnel in communication could help the patients and also other health professionals during their communication. Some of the responses are:

"Trying to communicate by writing and if digital materials like digital letter boards be available, could help with communication. Additionally availability of a person who is specialized in this services like speech therapists."

"At least having writing materials so the patients can write their thoughts and we can understand them easily."

"If there is training on how to communicate, if there is material for patients to express their thoughts, if there is a communication-cantered course in our curriculum, because we have not learned how to communicate with these patients during the course."

4.2. Quantitative result

Demographic data

69 observations were made within five minutes of each health professional working in the ICU and Emergency ward communicating with their patients. Of these, 43 (62.3%) were nurses, with five of them having specialized in emergency and critical care nursing. 24 (34.8) were residents, consisting of 3 internal medicine residents, 8 anaesthesia and critical care residents, 13 emergency and critical care medicine residents, and 2 respiratory therapists who made up the 2.9% group.

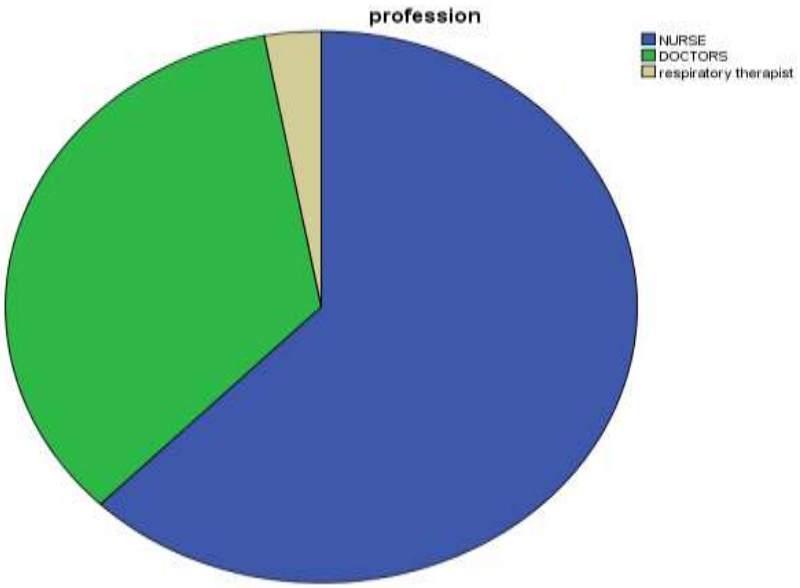


Figure 1 Observed professionals

The minimum and maximum years of experience for nurses were one year and six years, respectively. While the physicians were R2 and R3 residents of internal medicine, emergency and critical care and anaesthesia and critical care medicine students who were having at least their second attachment in the ICU or Emergency ward. Both of the respiratory therapist have 1 year of experience and they were both working in the ICU.

Table 2 Nurses and physicians years of experience

Profession		Frequency	Percent
Nurses	1	6	14.0
	2	4	9.3
	3	9	20.9
	4	12	27.9
	5	10	23.3
	6	2	4.7
	Total	43	100.0
Doctors	R2	15	62.5
	R3	9	37.5
	Total	24	100.0

The minimal experience for nurses is one year, while a large proportion of nurses have four years or more. Both of the respiratory therapists have worked for a year. Of the residents, nine (37.5%) are R3 and fifteen (62.5%) are R2.

Table 3 current working ward of professionals

		Profession			
		Nurses	Doctors	Respiratory therapist	Total
current working ward	ICU	37	12	2	51
	emergency	6	12	0	18
Total		43	24	2	69

Quality of professional's behaviour

The most practiced three positive behaviour among health professionals were augmenting patient's comprehension, asking tagged yes or no questions and repeating patient's response; making eye contact. However, most health professional did not suggest mode of communication for their patients.

Table 4 Positive communicational behavior of professionals

Positive behavior			
Behaviors	Choices	Frequency	Percent
Asks tagged yes or no questions	Do not	11	15.9
	Do	58	84.1
	Total	69	100.0
Provide response choices	Do not	26	37.7
	Do	43	62.3
	Total	69	100.0
Physically assists patients	Do not	35	50.7
	Do	34	49.3
	Total	69	100.0
Suggests mode of	Do not	60	87.0

communication	Do	9	13.0
	Total	69	100.0
Repeats patient's response	Do not	16	23.2
	Do	53	76.8
	Total	69	100.0
Augments patient's comprehension	Do not	10	14.5
	Do	59	85.5
	Total	69	100.0
Greets patients by name/touch	Do not	34	49.3
	Do	35	50.7
	Total	69	100.0
Asks open ended questions	Do not	18	26.1
	Do	51	73.9
	Total	69	100.0
Makes eye contacts	Do not	16	23.2
	Do	53	76.8
	Total	69	100.0

Conversely, the most common negative behaviours include talking excessively loudly (63.8%) and asking questions that patients are unable to respond to (63.8%). In 23.2% of communication sessions, the least common bad professional behaviour is failing to get patients' attention.

Table 5 Negative communication behavior of health professionals

Negative behavior			
No assistance when needed	Do not	48	69.6
	Do	21	30.4
	Total	69	100.0
Asks questions patients can't answer	Do not	25	36.2
	Do	44	63.8
	Total	69	100.0
Ignores patients communication attempt	Do not	49	71.0
	Do	20	29.0
	Total	69	100.0
No opportunity for patient to respond	Do not	51	73.9
	Do	18	26.1
	Total	69	100.0
Interrupts patients message	Do not	31	44.9
	Do	38	55.1
	Total	69	100.0
Does not gain patients attention	Do not	53	76.8
	Do	16	23.2
	Total	69	100.0
Self-talk, mumbling	Do not	51	73.9
	Do	18	26.1
	Total	69	100.0
Speaks too rapidly	Do not	25	36.2
	Do	44	63.8
	Total	69	100.0
Does not look at the patient	Do not	46	66.7
	Do	23	33.3
	Total	69	100.0

Generally out of 69 observations made during patient interactions, 52 (75.4%) showed positive behavioural qualities, while 17 (24.6%) showed negative behavioural qualities.

Communication method used and its success

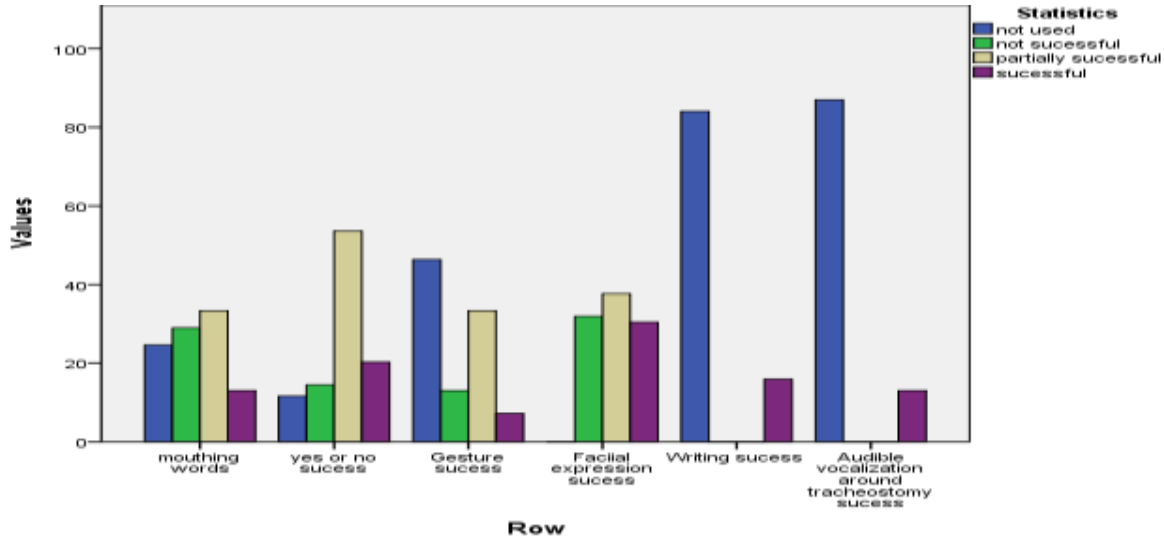


Figure 2 success rate of the methods used

Three scales—not successful, partially successful, and successful communication—have been derived from the scales used to measure the effectiveness of the communication utilizing the modalities. The successful communication is determined by how well the message was understood, which is messages that had no response when one is obliged and messages attempted but not conveyed or abandoned are categorized as unsuccessful messages. A message that is partially conveyed is categorized as partially successful and lastly messages that are conveyed with adequate partner response indicating comprehension of basic meaning and messages conveyed with elaborated response indicating complete comprehension of entire message are categorized as successful communications.

Table 6 communication methods success

	not used	not successful	partially successful	successful
mouthing words	24.6%	29.0%	33.3%	13.0%
yes or no success	11.6%	14.5%	53.6%	20.3%
Gesture success	46.4%	13.0%	33.3%	7.2%
Facial expression success	0.0%	31.9%	37.7%	30.4%
Writing success	84.1%	0.0%	0.0%	15.9%
Audible vocalization around tracheostomy success	87.0%	0.0%	0.0%	13.0%

Regarding the communication modes, 61 (81.4%) of the health professionals employed the yes-or-no sign, 52 (75.4%) used mouthing words, 37 (53.6%) used gestures, 11 (15.9%) used writing, and 9 (13%) utilized audible vocalization around a tracheostomy tube. While 69 (100%) of the health professionals utilized facial expressions, none of the professionals used drawings (0%).

In general from 69 observation of health professional's communication with their patients 228 communication methods were used and 69(30.3%) communication methods used were fully successful, 109(47.8%) communications methods used were partially successful and 50(21.9%) were unsuccessful communication methods used. From all successful communication methods 21(30.4%) is facial expression and 14(20.2%) is yes or no sign. There was only one tracheostomy patient present for the duration of the observation. Of the nine communication observations, all of them were successful with 4 communications message conveyed with adequate partner response and 5 communications message conveyed with elaborated partner responses. From all communication modalities writing and audible vocalization around tracheostomy has full success rate but has minimal frequency of usage.

Major (triangulated) findings of the research

1. The existing communication modalities used

Based on observation, the most common means of communication are facial expressions, followed by yes/no signs and mouthing words. The majority of medical professionals also reported that their methods for communicating with patients include nodding or neck movement

and yes or no choices, Using signs, facial expression, giving choices of answers and narrowing choices.

Despite the fact that the majority of professionals advise using writing as one of their strategies, the observational findings indicate that using writing materials was the second least popular method of communication. Furthermore, very few experts recommend a communication method to their patients; instead, the majority of them employ arbitrary communication strategies rather than those that would be most comfortable for the patient.

2. Successfulness of communication methods used by health professionals

As seen by observations and responses from health professionals interviewed, the most popular communication method is the yes-or-no sign, which is only partially successful when used. Writing, on the other hand, is the least popular communication method and when used, is 100% successful.

During the observation 228 communication methods were used and 69(30.3%) communication methods used were fully successful, 109(47.8%) communications methods used were partially successful and 50(21.9%) were unsuccessful communication methods used. Even while the majority of medical professionals said that they could communicate with patients easily and satisfactorily, every single one of them acknowledged that there were times when it was difficult.

The quality of communication of health professionals with their patients

Three positive actions that health staff most frequently practiced were improving the patient's understanding, asking tagged yes/no questions, and repeating the patient's response while keeping eye contact. However, the vast majority of medical practitioners did not suggest a communication strategy to their patients. On the other hand, the most prevalent negative behaviors, which may be caused by, include talking loudly and asking questions that patients are unable to answer. Since they were all referred by professionals, none of them received any communication training for patients who required it.

75.4% of the professionals exhibited positive behavioral qualities, according to observations of their communication. The researcher also noticed that the majority of staff members made an effort to fully comprehend and interact with their patients' emotions.

4. Perspective of health professionals regarding the use of communication alternatives into patient care

Even if the use of assistive communication material like pen and paper or texting on phone are very low or uncommon, from the 14 health professionals 8 of them had mentioned about how availability and use of alternative communication modalities could make their communication easier and all of the respondents support the idea of using these communication modalities. They also had mentioned some materials, as alternative communication materials, that could be provided in the units to help their communication with patients. Others also described the benefits of alternative communication modalities while explaining about things than could make their communication better with their patients in their wards. This all can show us that the health experts have favourable feeling toward the use of communication alternatives.

Although the professionals had no training and exposure of alternative communication modalities, they have a good perspective of view about their usage and open to learn and use this modalities.

CHAPTER FIVE

DISCUSSION

Head nodding was the most common form of communication, followed by mouthing words and gestures, in 694 communication episodes, according to a descriptive research published by the American Association of Critical Care Nurses. The most common ways to communicate are head nodding and yes/no gestures, according to another descriptive observational research (Happ et al., 2004). This also occurs in this study, when out of 228 communication sessions, 75.4% of the participants used yes or no signs usually by head nodding. Mouthing words and gestures came in second and third, with 53.6% and 15.9% of the participants, respectively. In all of the studies the use of assistive communication items like writing supplies and word board are little to no usage. Writing utensils and word processors are examples of assistive communication tools that are rarely or never used in all of the researches. In contrast to previous studies, writing on loose paper, tablets, and notepads was the most common form of communication among hospitalized head and neck cancer patients in a US research (Rodriguez & Blischak, 2010). These may vary depending on how the hospital supplies its materials and, as the research participants said, on whether or not there are protocols and rules on communication as well as the communication trainings that professionals have received. This also adversely affects the success rate of their communication, since they are using limited communication modalities.

Maintaining eye contact was shown to be the most beneficial nursing behavior among 1693 communication actions in a descriptive observational research conducted in Pennsylvania (Happ et al., 2011).. Maintaining eye contact was the third most favorable activity among professionals, despite improving patient comprehension and asking yes/no labeled questions being the most beneficial behaviors in this study. In Pennsylvania, research likewise revealed that 70% of communication episodes were effective; however, in this study, only 30.3% of communication events were entirely successful, and 47.8% were just somewhat successful (Happ et al., 2011). A survey conducted in Iran also revealed that 45.7% of nurses were partially satisfied with their communication, whereas none or 0% were entirely satisfied (Momennasab et al., 2019). The discrepancy in the success rates of communication episodes of the study in Pennsylvania may be attributed to cultural differences, variations in communication training, and differing healthcare

system structures, which impact the effectiveness and satisfaction levels of nurse-patient interactions.

The communication abilities and experiences of critical care nurses reveal significant challenges across various contexts. A South Korean study identified key themes: unexpected communication difficulties due to unfamiliarity with non-verbal communication, mechanical ventilation hindering verbal communication, and a gap between theoretical training and practical application, compounded by the urgent nature of the workplace. Nurses learned through trial and error, emphasizing the crucial role of communication experiences in patient care, and highlighting the necessity of augmentative and alternative communication (AAC) tools (Yoo et al., 2020). A systematic review of 12 studies found barriers such as lack of AAC knowledge and training, attitudinal issues, and insufficient communication tools, suggesting that training, experience, and support systems are vital (Finke et al., 2008).. During the COVID-19 pandemic in Cyprus, ICU environment factors and a lack of assistive materials and training hindered communication with intubated patients (Kyranou et al., 2022). A pilot study in North Central London also noted barriers like sedation and motor weakness, recommending better training, continuity of care, and communication devices. These findings align with previous research, which consistently identifies similar communication barriers like patients consciousness, medication they are taking, staffs willingness, and the environment, underscoring the pervasive and critical need for improved communication strategies and support systems in critical care settings (Magnus & Turkington, 2006). Collectively, these studies underscore the need for targeted training, support systems, and AAC integration to improve nurse-patient communication in critical care settings.

A qualitative study conducted in five large hospitals in Denmark's ICUs revealed three main themes regarding health teams' understanding of AAC implementation. First, professionals demonstrated high motivation and commitment to using AAC, recognizing its potential to enhance communication. Second, despite acknowledging the psychological benefits of communication, cultural beliefs prioritize treatment and life preservation over communication efforts. Lastly, frustration often led staff to ignore communication attempts from patients due to difficulties in understanding them (Handberg & Voss, 2018) . Similarly, in this research found that although the use of assistive communication materials like pen and paper or texting on

phones was uncommon, 8 out of 14 health professionals acknowledged that alternative communication modalities could facilitate easier communication. All respondents supported the idea of using these modalities and suggested various materials that could aid communication in their units. These findings indicate a favourable attitude among health professionals towards the use of alternative communication methods, highlighting the potential for improved communication practices in critical care settings. This consistency between studies underscores the critical need for targeted interventions and training programs to address communication barriers and enhance patient care across diverse healthcare environments.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1. Conclusion

This study delved into the communication practices between health professionals and patients in critical care settings, revealing the modalities, barriers, and potential areas for improvement. Through a combination of qualitative and quantitative analyses, it was found that the most common methods of communication included facial expressions, yes/no signs, and mouthing words, while writing and other alternative tools were underutilized despite their effectiveness. Yes/no signs were frequently used but only partially successful, whereas writing and vocalization around a tracheostomy were highly successful but rarely employed. Positive communication behaviours, such as augmenting patient comprehension, asking yes/no questions, and making eye contact, were commonly observed, although negative behaviours like asking unanswerable questions and speaking too loudly were also present. Barriers to communication were identified at multiple levels, including patient factors (e.g., consciousness level, anxiety), professional and environmental factors (e.g., emotions, workload), and physical barriers (e.g., sedation, restraints).

The study also highlighted health professionals' perspectives, showing that many recognize the benefits of alternative communication methods and are willing to adopt them despite a lack of formal training. This openness suggests a readiness for change and improvement in communication practices. The findings underscore the need for targeted interventions to enhance communication by addressing both the positive and negative behaviours and overcoming identified barriers. Implementing more effective communication tools and training could lead to significant improvements in patient care within critical care settings. Overall, the study emphasizes the critical role of effective communication in patient outcomes and the importance of continuous efforts to refine and advance these practices in healthcare environments.

6.2. Recommendations

Based on the findings of this study, recommendations are proposed to enhance communication practices in critical care settings; comprehensive training programs should be implemented to equip health professionals with the necessary skills and knowledge to effectively communicate with patients, particularly using alternative modalities such as writing. Additionally, there is a need to increase the availability and accessibility of alternative communication tools within healthcare facilities. Professional behaviours should be continuously monitored and supported, with emphasis on addressing negative communication behaviours such as speaking too loudly or asking questions patients cannot answer. Also, creating supportive environments that prioritize effective communication, including quiet spaces and adequate privacy, is essential. Furthermore, regular evaluation and feedback mechanisms should be established to assess the effectiveness of communication interventions and identify areas for improvement. By implementing these recommendations, healthcare organizations can enhance communication practices and ultimately improve patient outcomes in critical care settings.

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ANNEX

Information sheet

Greeting: Good morning/afternoon!

Hello, my name is Bethlehem Fetene and I am Addis Ababa university student and I am going to collect data for the sake of research in Addis Ababa University. I am conducting a study with the aim to explore the existing communication modalities used by health professional and to investigate these professionals believe regarding the use of alternative communication or AAC into patient care in ICU and Emergency units of St' Paulo's Hospital, Addis Ababa, Ethiopia. The information I collect will help your Hospital at large to plan health services. Now you are randomly selected for the survey. The questions usually take about 15 to 20 minutes.

Objective of the study: to explore the existing communication modalities used by health professional and to investigate these professionals believe regarding the use of alternative communication or AAC into patient care in ICU and Emergency units of St' Paulo's Hospital, Addis Ababa, Ethiopia.

Benefit of the study: The participants will get an insight about augmentative alternative communication methods after the data collection.

Risk of the study: Participating in this study will not have any risk / harm.

Rights of Participants: You have full right either to Participate or decline participation in this study as participant. You may respond to all the questions or you may not answer to questions you don't want to and you may end the interview at any time you want. You can ask any question which is not clear for you.

Confidentiality: Any information forwarded will be kept confidential and names will not be written or specified.

Do you agree to participate in the study? Yes □ no □

Thank you for being volunteer to participate in the study.

Participant signature _____date_____

Name of data collector _____Signature _____phone number_____

Qualitative data questionnaire (Magnus & Turkington, 2006; Yoo et al., 2020)

Semi-structured Interviews

Socio Demographic Data

1. Age
2. Profession
3. speciality _____
4. years of experience
5. Current working Ward ICU ☐
   ER ☐
6. Time started_____ End at _____
7. What kind of care do you provide to your patients?

   _____

   _____

8. What is the primary focus when you communicate with your patients?

   _____

   _____

9. Can you rate your ease of communication with your patients?

   _____

   _____

10. Have you ever face difficulties in communicating with your patients? If so, specify them.

    _____

11. Have you done any personal effort to communicate effectively with your patient?

    _____

12. What strategies do you use to facilitate the communication with your patient?

    _____

13. What are the factors affecting your communication based on your view?

    _____

    _____

14. Have you receive advice about communication with the patient?

    _____

    _____

15. Have you and your staff received training on working with patients with communication need?

    _____

    _____

16. What do you think help communication in ICU?

    _____

    _____

17. What do you think about using an alternative communication methods like using pictures, using pen, or other methods during communication?

    _____

    _____

18. Any other comment?

Quantitative data checklist(Happ et al., 2011)

Socio Demographic Data

1. Age
2. Profession
3. speciality _____
4. years of experience
5. Current working Ward ICU 
   ER 
6. Time started_____ End at _____

Quality; positive nurse behavior	**remark**
Asks tagged yes/no questions	
Provides response choices	
Physically assists patient	
Suggests mode of communication	
Repeats patient's response	
Augments patient's comprehension	
Repeats for clarification	
Greets patient by name/touch	
Asks open-ended questions	
Makes eye contact	

Quality; negative nurse behaviour	**Remark**
No assistance when needed	
Asks questions patient can't answer	
Ignores patient's communication attempt	
No opportunity for patient to respond	
Interrupts patient's message	
Does not gain patient's attention	
Self-talk, mumbling	
Speaks too rapidly	
Does not look at patient	

Methods used	**Remark**	**Success**
Yes/no signal		
Mouthing words		
Gestures		
Facial expression		
Writing		
Audible vocalization around tracheostomy tube		
Drawing		

Remark -Say “yes” if the health professional showed the behaviour during the communication period and “no” if the behaviour did not show the behaviour during the communication period.

Success- put the number 1-6 for each success rate observed during the communication period

1. No communication response when one is obligated
2. Message attempted but not conveyed or abandoned
3. Message partially conveyed (partner has to interpret to obtain partial meaning, partner has to clarify)
4. Message conveyed with adequate partner response indicating comprehension of basic meaning
5. Message conveyed with elaborated partner response (action or verbal) indicating complete comprehension of entire message (basic idea plus details)
6. NA = Message did not obligate a response

የመረጃ መስጫ

ሰላም ጤና ይስጥልን እኔ የአዲስ አበባ ዩኒቨርስቲ ተማሪ ስሆን ለጥናት የሚሆን መረጃ እየሰበሰብኩ እገኛለሁ፡፡ጥናቱም በቅዱስ ጳውሎስ ሆስፒታል ድንገተኛ ክፍል እና ጽኑ ህሙማን ክፍል ዉስጥ የሚገኙ የጤና ባለሙያዎች ለታካሚዎቻቸው የሚጠቀሙባቸውን ነባር የመግባቢያ ዘዴዎችን ለመመርመር እና እነዚህ ባለሙያዎች አማራጭ ግንኙነት ዘዴዎችን ወይም AAC ለታካሚ እንክብካቤ መጠቀም ያላቸውን አመለካከት ለመመርመር ወይም ለማጥናት ሲሆን የምሰበስበው መረጃ ሆስፒታላችሁን በአጠቃላይ የጤና አገልግሎቶችን ለማቀድ ይረዳል። አሁን ለዳሰሳ ጥናቱ በዘፈቀደ ተመርጠዋል። ጥያቄዎቹ አብዛኛውን ጊዜ ከ15 እስከ 20 ደቂቃዎች ይወስዳሉ።

አላማው፡- በቅዱስ ጳውሎስ ሆስፒታል ድንገተኛ ክፍል እና ጽኑ ህሙማን ክፍል ዉስጥ የሚገኙ የጤና ባለሙያዎች ለታካሚዎቻቸው የሚጠቀሙባቸውን ነባር የመግባቢያ ዘዴዎችን ለመመርመር እና እነዚህ ባለሙያዎች አማራጭ ግንኙነት ዘዴዎችን ወይም AAC ለታካሚ እንክብካቤ መጠቀም ያላቸውን አመለካከት ለመመርመር ወይም ለማጥናት።

የጥናቱ ዋና ጥቅም፡- መረጃውን ከወሰድን በኋላ ስለአማራጭ ግንኙነት ዘዴዎችን ወይም AAC ሰፋ ያለ ግንዛቤ በእቅድ እሰጣለው ።

የጥናቱ የጎን ጉዳት፡- ጥናቱ የጎን ጉዳት የለውም፡፡

የጥናቱ ተሳታፊዎች መብት፡-በጥናቱ ላይ የመሳተፍም ያለመሳተፍም መብት አሎት፡፡መመለስ የሚፈልጉትን መመለስ፤መመለስ የማይፈልጉትን ያለመመለስ መብቶ የተተበቀ ነው፡፡እንዲሁም ጥናቱን በፈለጉ ሰአት ማቋረጥ ይችላሉ፡፡ያልገባዎትን ማንኛውም ጥያቄ የመተየቅ መብት አሎት፡፡

የጥናቱ ሚስጥራዊነት፡-የሚመልሷቻው ጥያቄዎች ሁሉ ሚስጥራዊነታቸው የተጠበቀ ሲሆን የተሳታፊዎች ስም አይጠቀስም፡፡

ጥናቱ ውስጥ ለመሳተፍ ፍቃደኛ ኖት?

አዎ ☐ ☐

በጥናቱ ላይ ለመሳተፍ ፍቃደኛ ስለሆኑ እናመሰግናለን!

ጥያቄውን የሞላው ተሳታፊ ፊርማ———— ቀን ————

ጥያቄውን ያስሞላው ተማሪ ፊርማ———— ቀን ————

ክፍል አንድ፡ የማህበራዊና የስነህዝብ ገጽ

1. እድሜ
2. ሞያ
3. ስፔሻሊቲ _____
4. የስራ
5. አሁን ሚሰሩበት ክፍል ☐ ICU
   ☐ ER
6. የተጀመረበት ሰአት _____ ያለቀበት ሰአት _____
7. ለታካሚዎችዎ ምን ዓይነት እንክብካቤ ይሰጣሉ?

   _____

   _____
8. ከታካሚዎችዎ ጋር ሲገናኙ/ በንግግር ለመግባባት ሲሞክሩ ዋናው ትኩረት ምንድን ነው?

   _____

   _____

9. ከታካሚዎችዎ ጋር በቀላሉ የመግባባት ቀላልነትዎን ደረጃ መስጠት ይችላሉ?

   _____

   _____

10. ከታካሚዎችዎ ጋር የመግባባት ችግር አጋጥሞት ያውቃል? ከሆነ, ይግለጹዋቸው.

    _____

    _____

11..ከታካሚዎ ጋር ውጤታማ በሆነ መንገድ ለመገናኘት ማንኛውንም የግል ጥረት አድርገዋል?

    _____

    _____

12.ከታካሚዎ ጋር ያለውን ግንኙነት ለማመቻቸት ምን አይነት ስልቶችን ይጠቀማሉ?

_____

13. በእርስዎ አመለካከት ላይ በመመስረት የእርስዎን ግንኙነት የሚነኩ ምክንያቶች ምንድ ናቸው?

_____

_____

14. ከታካሚው ጋር ስላለ ግንኙነት ምክር ይቀበላሉ?

_____

_____

15. እርስዎ እና ሰራተኞችዎ የግንኙነት ፍላጎት ካላቸው ታካሚዎች ጋር ለመስራት ስልጠና ወስደዋል?

_____

_____

16. በ ICU ውስጥ ግንኙነትን ለመርዳት ምን ያስፈልጋል ብለው ያስባሉ?

_____

_____

17. በግንኙነት ጊዜ እንደ ሥዕሎች፣ ብዕር ወይም ሌሎች አማራጭ የመገናኛ ዘዴዎችን ስለመጠቀም ምን ያስባሉ?

_____

_____

18. ሌላ አስተያየት አለኝ ?