

Level of Awareness and Willingness of Allied Health Students in Basic Filipino Sign Language: Basis for Program Enhancement Plan

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ABSTRACT

This study aimed to assess the level of awareness and willingness of allied health students in Basic Filipino Sign Language (FSL) and to examine their relationships and differences based on selected demographic factors, including age, sex, year level, program, and prior FSL background. The results served as the basis for developing an enhanced program plan. Despite the growing Deaf population and official recognition of FSL in the Philippines, its limited inclusion in education and healthcare training contributes to unequal access to quality healthcare. A descriptive, correlational, and comparative research design was employed. Data were collected from 257 allied health students enrolled in the Bachelor of Science in Nursing (BSN), Bachelor of Science in Midwifery (BSM), and Bachelor of Science in Respiratory Therapy (BSRT) programs using a self-designed and carefully modified questionnaire. Stratified sampling was applied, and data were analyzed using descriptive statistics, Spearman's rho, and the Kruskal-Wallis test. Findings revealed a moderate level of awareness of basic FSL (median = 3.00), with students recognizing its importance in Deaf communication and healthcare, although gaps were observed in legal knowledge, Deaf culture, and practical application. Willingness to learn FSL was very high (median = 4.00) and did not significantly differ across groups ($p > 0.05$). Awareness demonstrated a weak negative correlation with age ($p = -0.0226$, $p < 0.001$) and significant differences across year level ($p = 0.003$), program ($p < 0.001$), and prior FSL background ($p = 0.044$), with notable differences among selected student groups. The study concluded that allied health students exhibit high willingness to learn and use basic FSL, recognizing its crucial role in effective communication with the Deaf community and promoting inclusive healthcare. Nevertheless, certain aspects of awareness remain limited. Implementation of an enhanced program is recommended to strengthen awareness and further support students' engagement with basic FSL.

Keywords: Level of Awareness, Willingness, Basic Filipino Sign Language.

INTRODUCTION

Communication is fundamental to providing effective and quality healthcare, fostering understanding and trust between healthcare providers and patients. As stated by Jenstad, et al. (2024), effective provider-patient communication plays a vital role in health outcomes by promoting better understanding of care and treatment. Patients with communication vulnerabilities such as those with hearing loss, language barriers, or cognitive impairments require adaptive communication strategies to ensure their healthcare needs are met. Without these strategies, they face increased risks of misdiagnosis, unnecessary suffering, and higher healthcare costs. Addressing these needs through tailored communication methods can mitigate these risks, improve care effectiveness, and enhance patient satisfaction.

For individuals with hearing impairments, sign language serves as a crucial bridge to inclusive and equitable healthcare services. Deaf individuals communicate through various methods, adapting to their environment and the people they interact with. Some rely on oralism, utilizing spoken language with the support of hearing aids or cochlear implants, while others depend on lip-reading, which, despite its usefulness, presents challenges due to similar-looking lip patterns. Sign language, one of most effective communication methods, combines handshapes, facial expressions, gestures, and body language. Additionally, fingerspelling is commonly used to spell out words, while tactile signing supports communication for individuals who are both deaf and visually

impaired. Alternative communication methods, such as Augmentative and Alternative Communication (AAC) and cued speech, further assist those with additional communication needs (National Deaf Children's Society, 2025).

According to Fránek (2020), a “deaf” (lowercase ‘d’) individual refers to someone with medical or physiological condition of hearing loss but who does not identify with or participate in the Deaf community. In contrast, a “Deaf” (capital ‘D’) individual embraces Deaf culture, viewing deafness as a cultural identity rather than merely a medical condition.

Allied health providers are an integral part of the healthcare system. Their ability to communicate effectively with all patients, including those who use sign language, is essential for delivering comprehensive care. However, according to Wheatley (2021), many allied health students do not receive formal training in their national sign language, which can hinder their ability to interact with deaf patients. Similarly, Kruse, et al. (2021) emphasizes healthcare providers strive to enhance communication with Deaf patients and their families, yet they often face challenges due to insufficient preparation, as many educational institutions fail to recognize Deaf culture into their programs, leaving graduates unprepared for effective interactions. Moreover, healthcare facilities typically do not offer training on communicating with Deaf individuals, further widening the gap in patient care.

Sign languages are vital communication tools for Deaf and Hard of Hearing (D&HH) communities, as they allow individuals to express themselves and understand others in a way that spoken language does for the hearing community. These languages evolve naturally within deaf communities, reflecting the cultures and experiences of these individuals. Similar to spoken languages, sign languages are multifaceted and diverse, with each having its own grammar, syntax, and vocabulary. There is no single or universal sign language; however, various countries or regions have developed their own unique languages. For instance, American Sign Language (ASL) differs from British Sign Language (BSL), despite both being used in English-speaking countries. The lack of a universal standard results in a wide variety of sign languages globally, with the World Federation of the Deaf estimating around 300 distinct sign languages. Approximately 70 million people use these languages worldwide, making them a significant part of global communication and culture. They provide a way for deaf individuals to fully participate in their communities, access education, and engage with others in a meaningful way (Sharma, et al., 2024).

Furthermore, sign language is primarily formed through facial expressions, hand on body movements, visual symbols, and gestures, making it a unique mode of communication. It differs from spoken language in terms of sentence structure and grammar, even though it may be based on the same linguistic foundation. Each country or region has its own version of sign language, with diverse cultural and linguistic characteristics. While sign language is closely related to the spoken language of a particular country, it has its own grammatical rules and sentence structure. Unlike spoken language, where new words are created by modifying sounds, sign language introduces new vocabulary by employing distinct signs to represent concepts (Abushaira, et al., 2023).

Recognizing this need, allied health providers should develop basic sign language skills to enhance communication and improve patient outcomes. Despite its significance, the awareness and willingness of basic Filipino sign language among allied health students remain unexplored. As future healthcare providers, their familiarity and willingness to learn Filipino sign language can significantly influence the inclusivity and accessibility of healthcare services for the deaf and hard of hearing Filipino community.

The prevalence of hearing loss worldwide underscores the urgency of integrating sign language education into healthcare training. By 2050, nearly 2.5 billion people, approximately one in ten individuals, are expected to experience disabling hearing loss. Currently, more than 430 million people, including 34 million children, require hearing rehabilitation (World Health Organization, 2024). In South-East Asia alone, over 400 million individuals experience hearing loss, with more than 100 million needing rehabilitation services, expected to rise to at least 185 million by 2050 (World Health Organization, 2021).

The deaf community faces significant barriers within the healthcare system, leading to disparities in care. In the United States, where an estimated 250,000 to 1 million individuals use American Sign Language (ASL), studies

show that Deaf individuals have higher rates of emergency department visits and are more likely to experience chronic health conditions. Contributing factors include inaccessible healthcare services, ineffective provider-patient communication and a lack of health information in ASL. Many medical education programs fail to adequately address the healthcare needs of Deaf individuals, exacerbating health inequities (Narayan, et al., 2023).

In the Philippines, Filipino Sign Language (FSL) was officially recognized as the national sign language in 2018 through the Filipino Sign Language Act. FSL has a rich history dating back to 1604 in Dulag, Leyte, and has since evolved while maintaining its uniqueness as a language developed by the Filipino Deaf community. Under the Philippine Statistics Authority (PSA), approximately 1.78 million Filipinos had hearing difficulties as of 2020. However, communication barriers persist due to a general lack of familiarity with FSL among hearing individuals, highlighting the need for certified sign language interpreters and improved education programs (UP Department of Linguistics, 2023). Despite legislative efforts, such as Republic Act 7277 (Magna Carta for Disabled Persons) and Department of Education (DepEd) policies on inclusive education, FSL remains largely inaccessible to many hearing Filipinos. This limitation continues to restrict the full integration and participation of the Deaf community in society (Montezor, 2024).

Despite the enactment of Republic Act No. 11106, known as the Filipino Sign Language (FSL) Act of 2018, which officially recognized FSL as the national sign language and mandated its use in various sectors, the Filipino Deaf community continues to face significant challenges in communication and inclusion. The law requires the use of FSL in schools, broadcast media, and workplaces, aiming to improve access to information and services for people with disabilities (PWDs). However, the practical implementation of these provisions remains inadequate, leading to persistent struggles for the Deaf community. In 2020, the University of Santo Tomas Faculty of Medicine and Surgery reported that 15% of Filipinos experience moderate to severe hearing loss. This figure underscores the significant number of individuals who could benefit from the widespread adoption of Filipino Sign Language (FSL). While the general public's lack of familiarity with FSL poses a challenge to effective communication, Marjorie Ramilo, president of the Guild of Thomasian Speducators (GuTS), highlights that while FSL has evolved and is commonly used within the Filipino Deaf community, its national recognition and understanding remain limited. This lack of awareness not only alienates individuals with disabilities but also hinders society from creating meaningful connections with the Deaf community. The communication gap between Deaf and hearing communities lead to feelings of isolation and frustration. The absence of inclusive environments and appropriate accommodation worsens these difficulties, highlighting the need for action beyond merely acknowledging FSL as the national sign language. Although legal provisions exist, a considerable gap between policy and implementation persists, leaving many Deaf individuals without sufficient support. The FSL Act mandates government agencies and educational institutions to collaborate with experts and incorporate Filipino Sign Language (FSL) into academic programs, making it available as an elective course. However, the sluggish implementation of these initiatives restricts opportunities for hearing individuals to acquire the language. Without widespread FSL education, the exclusion of the Deaf community persists, hindering their full participation in society. While the law represents progress toward inclusiveness, its success relies on consistent enforcement and a sincere commitment from society to learn and utilize FSL. In summary, although the FSL Act was a significant legislative milestone, its implementation remains insufficient, causing ongoing communication and social integration challenges for the Deaf community. The persistent lack of awareness and accessibility underscores the need for stricter policy enforcement and a broader cultural movement toward inclusivity. Beyond legal requirements, it is crucial to cultivate an environment where FSL is widely recognized and embraced, ensuring that people with disabilities, particularly Deaf individuals, receive the opportunities and respect they deserve. Bridging these gaps demands a collaborative effort from both the government and society to establish a genuinely inclusive and communicative environment for all (The Flame, 2023).

Further research indicates that access to health information and healthcare services is influenced by various factors, with communication quality being a crucial determinant. This is particularly significant for individuals with disabilities, such as those who are deaf or hard of hearing. Therefore, the attitudes and understanding of healthcare workers regarding disabilities play a vital role in the quality of care provided. Misunderstanding or a lack of knowledge about disabilities among healthcare professionals can lead to inadequate services for individuals with hearing impairments. Communication barriers are prevalent in healthcare settings and become

more pronounced when language and cultural differences are involved. Many deaf adults struggle with health literacy, which adversely affects their health outcomes. For instance, a significant proportion of deaf individuals may struggle to comprehend concepts such as normal body temperature or medical prescriptions, limiting their ability to manage their health effectively. Despite these challenges, healthcare systems frequently overlook the specific needs of deaf individuals. Understanding the knowledge, attitudes, and practices of healthcare professionals toward deaf patients can help develop targeted interventions, such as cultural competency and communication training, to improve healthcare delivery and outcomes for this population (Alamro, et al., 2023).

The Department of Science and Technology-Science and Technology Institute (DOST-STII) took a significant step toward inclusivity by organizing a two-day training workshop on Filipino Sign Language (FSL) in October 2023. This initiative aimed to create a more inclusive environment for the deaf and hard-of-hearing community by equipping employees with essential FSL skills. The workshop, held at the DOST-STII building, was facilitated by sign language interpreter Jordan S. Madronio and deaf assistant and trainer Aileen G. Santos. Through this training, participants gained valuable knowledge on how to communicate effectively using FSL, fostering a workplace that accommodates diverse communication needs. This effort aligns with the Filipino Sign Language Act (Republic Act 11106), which was signed into law in October 2018. The law recognizes FSL as the national sign language of the Filipino Deaf and mandates its use in educational institutions, broadcast media, and workplaces to ensure accessibility and equal opportunities. By incorporating FSL training into its operations, DOST-STII exemplifies how science and technology can be leveraged to promote inclusivity, breaking down communication barriers and fostering a society where information is accessible to all individuals, regardless of hearing ability (Agustin, 2023).

Filipino Sign Language (FSL) is the primary visual language of the Filipino Deaf community, characterized by its unique grammar, syntax, and idioms that reflect Filipino culture. Unlike American Sign Language (ASL), FSL has its own distinct structure, incorporating gestures, facial expressions, and coordinated hand and body movements to facilitate effective communication. Recognizing this significance, the Philippine government passed Republic Act No. 11106, or the FSL Act, in 2018, officially designating FSL as the national sign language. This law mandates its use in schools, government offices, workplaces, and broadcast media to promote equal access to opportunities for Deaf Filipinos (Benilde School of Deaf Education and Applied Studies, 2022).

Background Of The Study

Deaf awareness training aims to foster understanding and reduce barriers between Deaf and hearing populations, enhancing accessibility and combating discrimination. Deaf and Hard of Hearing individuals, whose needs often remain unfamiliar to health professionals, require a person-centered approach tailored to their communication preferences. Despite the global increase in Deaf and hard-of-hearing populations, there is a significant lack of training of healthcare professionals and students in effectively interacting with these groups. Additionally, addressing the inequalities faced by Deaf and hard-of-hearing individuals, such as inadequate accessibility in healthcare, education, and disaster, as well as communication difficulties with healthcare providers which often result in poor health outcomes requires educating healthcare professionals about Deaf culture, communication strategies, and inclusive practices. Incorporating Deaf individuals into training programs and employing varied educational methods are vital for enhancing knowledge, reducing barriers, and ensuring equitable and quality care (Terry & Meara, 2024).

Filipino Sign Language (FSL) is essential for the communication and education of Deaf and Hard of Hearing (D&HH) individuals in the Philippines. However, despite its official recognition, many DHH individuals face literacy challenges due to limited incorporation of FSL in educational materials and teaching methods. Additionally, promoting awareness and encouraging the general population to learn FSL are crucial steps in dismantling barriers and ensuring equal opportunities for DHH individuals to succeed in society (Madronio, 2024).

Furthermore, the effective implementation of Filipino Sign Language (FSL) relies on strong collaboration among government agencies to create suitable curricula and develop necessary competencies. Integrating FSL into general education, particularly in sectors like healthcare and education, enables professionals to build trust and effective communication with the Deaf individuals. A law that fails to actively promote inclusivity remains

merely symbolic. For instance, without healthcare or educators trained in FSL, Deaf individuals, such as pregnant women or students, may be deprived of essential support. Achieving a truly inclusive society requires continuous assessment and improvement of services for the Deaf community to ensure they are not excluded from social progress. Therefore, conducting research on their specific needs is crucial to this endeavor (Junio, 2024).

Awareness and willingness to learn Filipino Sign Language included understanding its relevance as well as desire to study and practice it. Understanding these dimensions provided valuable insights into the educational landscape at the time and highlighted areas for improvement. This study aimed to assess the level of awareness and willingness of allied health students, particularly those in nursing, midwifery, and respiratory therapy, regarding Filipino Sign Language, which was crucial for effective communication with Filipino individuals who were Deaf and hard of hearing. As the healthcare environment became increasingly diverse, it was important for future healthcare professionals to possess the skills necessary to interact with all patients, including those with hearing difficulties. Although existing studies have emphasized the legal recognition of Filipino Sign Language (FSL), its cultural importance, and the broader challenges encountered by the Deaf in healthcare access, there remains limited research in the Philippines that directly examines the awareness and willingness of allied health students, particularly those in nursing, midwifery, and respiratory therapy to learn and use Basic Filipino Sign Language. Previous literature largely addresses policies, cultural perspectives, and communication barriers in general, but not on the preparedness of future healthcare providers. This study addressed this gap by examining the level of awareness and willingness of allied health students at Mary Chiles College to learn Basic Filipino Sign Language. The results generated empirical evidence on their current readiness, highlighted demographic factors that influenced their views, and provided a foundation for a program enhancement plan. By integrating FSL education into allied health training, the study aimed to better equip future healthcare professionals to deliver inclusive and equitable care to the Deaf and hard of hearing community.

Statement Of The Problem

This study aimed to assess the level of awareness and willingness of Basic Filipino Sign Language among allied health students at Mary Chiles College during the second semester of the academic year 2024 to 2025. Specifically, this study sought to answer the following questions:

1. What is the profile of allied health students in terms of:
 - 1.1 Age;
 - 1.2 Sex;
 - 1.3 Year Level;
 - 1.4 Program; and
 - 1.5 Background?
2. What is the level of awareness of allied health students in Basic Filipino Sign Language in terms of:
 - 2.1 The existence and purpose of Filipino Sign Language;
 - 2.2 Its role in communication with individuals who are Deaf or hard of hearing; and
 - 2.3 The importance of Filipino Sign Language in healthcare settings?
3. What is the level of willingness of allied health students to learn Basic Filipino Sign Language in terms of:
 - 3.1 Interest in Basic Filipino Sign Language;
 - 3.2 Communicating with Deaf individuals using Filipino Sign Language; and

3.3 Comfort level in learning and using Basic Filipino Sign Language?

4. Is there a significant relationship between the demographic profile of allied health students and their level of awareness and willingness to learn Basic Filipino Sign Language?
5. Is there a significant difference in the level of awareness and willingness to learn Basic Filipino Sign Language among allied health students when grouped according to their demographic profile?
6. What program can be developed to improve the level of awareness and willingness of allied health students in Basic Filipino Sign Language?

Statement Of Hypothesis

Ho1: There is no significant relationship between the profile of allied health students and their level of awareness and willingness in basic Filipino Sign Language.

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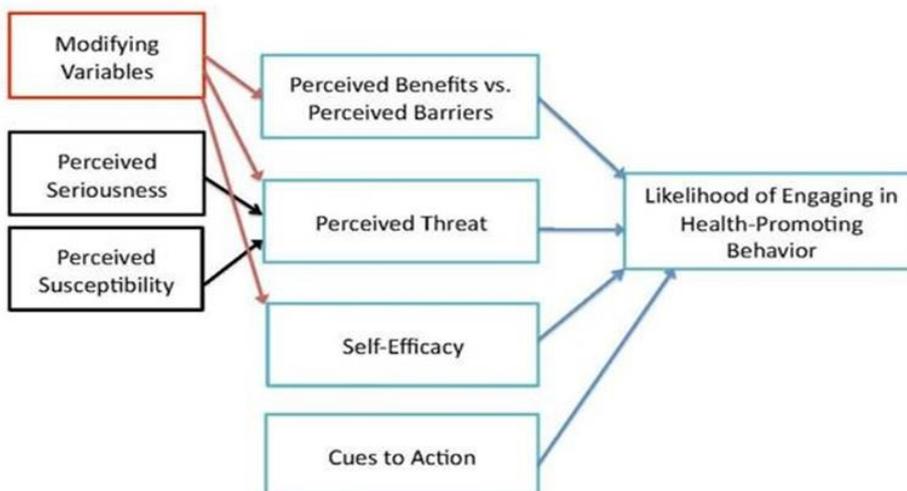
Ho2: There is no significant difference in the level of awareness and willingness to learn Basic Filipino Sign Language among allied health students when grouped according to their demographic profile.

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Theoretical Framework

This study is grounded on the theory of Health Belief Model (HBM), Theory of Planned Behavior (TPB), and Social Learning Theory, which further elaborated on the interconnectedness between this study and other theoretical frameworks.

Health Belief Model



Source: Rosenstock, I., Hochbaum, G., & Kegeles, S. (1950s)

Figure 1. Health Belief Model (1950s)

The Health Belief Model (HBM) is a theoretical framework which explains the factors shaping individuals' attitude and behaviors, making it a useful framework for understanding what influences patient compliance and health promoting practices. It was developed in the 1950s by U.S. public health research, the model was designed to strengthen the impact of health education (Daniati, et al., 2021).

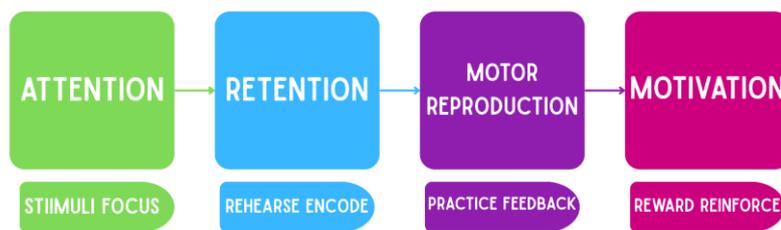
In the context of basic Filipino Sign Language, the Health Belief Model (HBM) provides valuable insights into the attitudes and behaviors of both healthcare providers and Deaf and Hard of Hearing (D&HH) individuals concerning communication through Filipino sign language. For instance, D&HH individuals may perceive limited access to healthcare or poor communication with healthcare providers as a major health risk, prompting them to actively seek healthcare providers who are proficient in sign language. In this context, perceived susceptibility may refer to the awareness that ineffective communication could lead to misdiagnosis, insufficient treatment, or poorer health outcomes.

The perceived severity would involve understanding that these barriers could have a significant negative impact on their overall health and well-being. For healthcare providers, the perceived benefits of learning basic sign language include improving their ability to provide inclusive care, enhancing communication with Deaf and Hard of Hearing (D&HH) patients, and fostering more positive patient experience. On the other hand, the perceived barriers may involve a lack of time, resources, or training opportunities to learn sign language, which could limit their willingness to adopt this mode of communication. Lastly, self-efficacy plays a crucial role, as healthcare professionals who are confident in their ability to learn and use sign language are more likely to invest in learning it, thereby enhancing health communication.

The researchers tend to utilize the Health Belief Model in this study; thus, programs and interventions can be tailored to target these perceptions. For D&HH individuals, healthcare systems can raise awareness about the benefits of learning sign language and provide accessible training resources. For healthcare providers, efforts can be directed towards lowering barriers by providing flexible learning opportunities, emphasizing the significance of inclusive care, and building their confidence in incorporating basic sign language into their practice. This approach could foster improved communication and, ultimately, lead to better healthcare outcomes for D&HH individuals. By utilizing the Health Belief Model, this model directs health communication strategies, ensuring that both patients and healthcare providers are motivated and equipped to use sign language in clinical settings for enhanced health outcomes.

Social Learning Theory

SOCIAL LEARNING THEORY



Source: Bandura, A. (1977)

Figure 2. Social Learning Theory (1977)

Albert Bandura’s Social Learning Theory (SLT) emphasized the importance of observation, imitation, and modeling in developing new behaviors, skills, and knowledge. SLT stated that learning takes place in a social context and was influenced by environmental, cognitive, and behavioral aspects. It employed essential concepts like attention, memory, reproduction, and motivation to describe how people learn and use new abilities (McLeod, 2024).

This study evaluated the profile, awareness, and willingness of basic sign language among Allied Health Students, as well as the differences in their knowledge and attitude before and after participation in the program. SLT provided a solid foundation for explaining the processes through which students learned sign language and adjusted their attitudes.

Attention – students must actively engage in learning through materials, demonstrations, and practice sessions. Understanding finger spelling, basic signs, and grammar requires focused attention.

Retention – cognitive processes help learners remember what they see during the program. Familiarity with finger spelling and comprehending sign language structure are dependent on allied health students’ ability to encode and retain information.

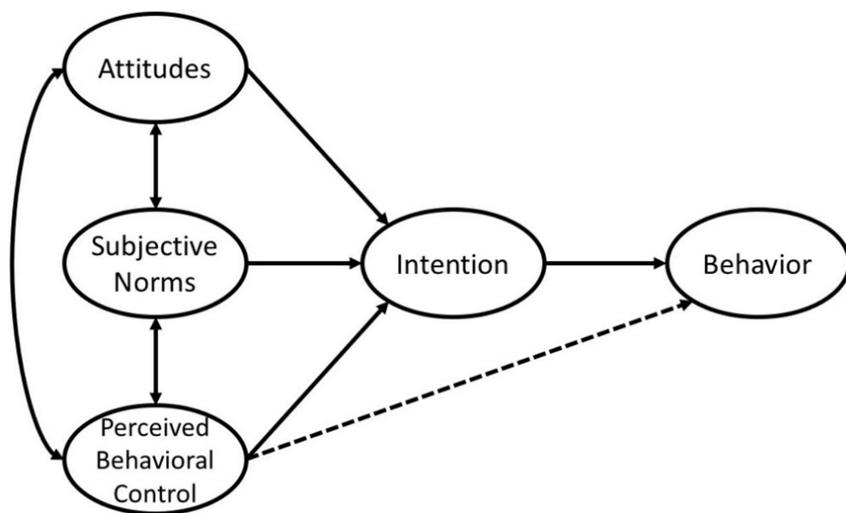
Reproduction – students practice what they have learned, improving their finger spelling, signing, and grammar through repetition and feedback.

Motivation – positive reinforcement, such as a supportive environment or recognition, enhances students’ willingness to learn and apply their knowledge.

Bandura's theory established a framework for assessing changes in awareness and willingness by highlighting the alteration of actions and attitudes following exposure to observational learning events. The study examined how participation in a structured learning program increased both the cognitive and emotional aspects of learning.

Lastly, the study emphasized the role of cognitive processes, observational learning, and social interaction in increasing awareness and willingness of basic sign language among allied health students. This framework underscored the significance of modeling, feedback, and reinforcement in the design of the sign language program and its improvement strategy.

Theory of Planned Behavior



Source: Ajzen, I. (1991)

Figure 3. The Theory of Planned Behavior (1991)

The Theory of Planned Behavior (TPB) developed by Ice Ajzen, where it provides a useful framework for understanding how various factors influence behavior intention which are determined by three factors: attitudes, subjective norms, and perceived behavior control. External factors can also directly force or prevent behaviors, regardless of intention, depending on how control the individual the behavior and how accurate perceived behavioral control has over it (Samson, 2021).

In this theory, the factors such as attitudes toward teaching and learning in general were crucial. This theory provided a valuable insight into understanding the level of awareness and willingness of allied health students in learning basic sign language. In the context of sign language training, the students' attitudes reflected their perceptions on the significance and relevance of sign language in their prospective healthcare roles. Positive attitudes were likely to enhance awareness and foster willingness, while negative or indifferent attitudes may hinder engagement. Subjective norms pertain to the social influences or expectations from peers, educators, or healthcare institutions to learn sign language. When students perceived strong support and encouragement from these groups, they were more inclined to embrace and participate in the learning process. Lastly, perceived behavioral control reflected the students' belief in their ability to successfully learn and apply sign language. If students believed that learning sign language was manageable and that they had adequate resources and support, their motivation and willingness to learn are more likely to increase.

By applying the TPB framework, the program offered a comprehensive assessment of the factors influencing allied health students' participation in sign language training. This approach emphasized both internal and external factors of awareness and willingness, while also guiding the researchers in developing strategic program enhancements, such as awareness campaigns, curriculum modifications, peer mentorship programs, and the integration of hands-on learning experiences. Through these targeted interventions, the researchers fostered increased awareness and willingness of fundamental basic sign language, thereby empowering allied health students to become more inclusive and effective communicators in healthcare settings.

Paradigm Of The Study

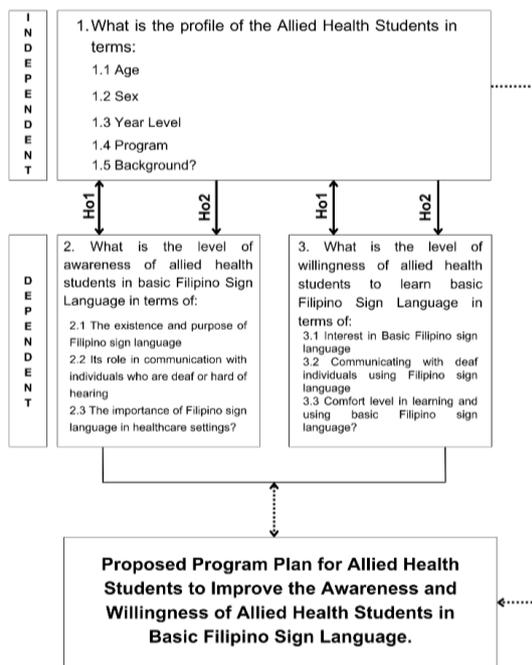


Figure 4. Level of Awareness and Willingness of Allied Health Students in Basic Filipino Sign Language: Basis for Program Enhancement Plan

The one-tailed arrow represents the difference in the level of awareness and willingness of allied health students when they are classified according to their demographic profile.

The two-tailed arrow shows the significant relationship between the demographic profile of the allied health students and their level of awareness as well as level of willingness to learn basic Filipino Sign Language.

The broken line indicates the basis for the development of the proposed program plan. The assessment of the students' demographic profile, level of awareness, and level of willingness serves as inputs in formulating a program plan aimed at enhancing the awareness and willingness of allied health students to learn and use basic Filipino Sign Language.

Assumptions Of The Study

This study on the level of awareness and willingness and allied health students in Basic Filipino Sign Language was conducted based on the following assumptions:

1. The study assumed that the demographic profile of the respondents such as age, sex, year level, programs, and their background in Filipino Sign Language, might have had varying influences on their level of awareness and willingness to learn basic sign language.
2. The study assumed that allied health generally had a low level of awareness regarding Basic Filipino Sign Language, which could have impacted their ability to communicate effectively with individuals who were Deaf or hard or hearing.
3. The study assumed that students in higher year levels demonstrated a greater willingness to learn Basic Filipino Sign Language compared to those in lower year levels, possibly due to increased exposure to patient care and communication challenges in clinical settings.
4. The study assumed that integrating a program in Basic Filipino Sign Language into the allied health curriculum could have improved students' awareness and willingness to learn, ultimately enhancing their competency in providing patient-centered care.
5. The study assumed that allied health students' awareness and willingness to learn Filipino Sign Language were shaped by the specific allied health programs in which they were enrolled.

Scope And Limitation

This study aimed to assess the level of awareness and willingness to learn Basic Filipino Sign Language among allied health students at Mary Chiles College during the second semester of the academic year 2024–2025. The respondents consisted of two hundred fifty-seven (257) students enrolled in the Bachelor of Science in Nursing (BSN), Bachelor of Science in Midwifery (BSM), and Bachelor of Science in Respiratory Therapy (BSRT) programs. These programs were selected as they represented the primary allied health courses offered by the college and played a critical role in patient care, where effective and inclusive communication was essential.

A Basic Filipino Sign Language program was conducted as part of the study to provide respondents with structured exposure to sign language concepts and basic communication techniques. The program served as an intervention to introduce and promote inclusive communication among allied health students.

Data were collected using researchers-made questionnaires that underwent content validation by experts to ensure clarity, relevance, and appropriateness.

One of the delimitations of the study was its setting, as it was conducted exclusively at Mary Chiles College. As a result, the findings might not have represented the views or experiences of allied health students from other colleges and universities. Additionally, the study was limited to the allied health programs of Bachelor of Science in Nursing (BSN), Bachelor of Science in Midwifery (BSM), and Bachelor of Science in Respiratory Therapy (BSRT), and did not include students from other programs offered by Mary Chiles College. The study aimed to explore the extent to which these students were more aware of Basic Filipino Sign Language and their willingness to learn and apply it in a clinical or healthcare setting. Furthermore, it sought to identify whether significant relationships and differences existed in their awareness and willingness based on demographic factors such as age, sex, year level, program, and background in Filipino Sign Language. These variables were selected to determine possible factors that might have influenced students' perspectives, interests, and openness toward learning sign language.

Moreover, the study was time-bound to one academic year, limiting the opportunity to observe the long-term changes in attitudes or the sustained impact of the program. It also did not address faculty perceptions, institutional policies, or external factors that might have influenced students' awareness and willingness to learn Basic Filipino Sign Language.

Despite these limitations, the study provided a significant foundation for developing inclusive educational strategies and identifying areas that required program enhancement. The findings of this study were expected to guide the integration of Filipino Sign Language into the allied health curriculum and to encourage further research on inclusive communication within healthcare education.

Significance Of The Study

This study on the level of awareness and willingness of allied health students at Mary Chiles College to learn Basic Filipino Sign Language is valuable for various stakeholders in education, healthcare, and communication. The results may aid in enhancing academic programs, strengthening professional preparation, and fostering inclusive services for the Deaf and hard of hearing community.

Allied Health Students – the findings of this study will provide valuable insights into their level of awareness and willingness to learn Basic Filipino Sign Language, allowing them to recognize the significance of effective communication with Deaf and Hard of Hearing (D&HH) patients as this will enhance their ability to offer inclusive and compassionate care.

Commission on Higher Education (CHED) – the findings of the study may serve as a basis for CHED in developing policies and initiatives that incorporate Basic Filipino Sign Language into allied health programs. This supports the agency’s role in advancing inclusive education and preparing future healthcare providers to deliver accessible and equitable care to the Deaf and hard of hearing communities.

Deaf and Hard of Hearing (D&HH) individuals – the findings of the study will ensure better communication with healthcare providers, leading to enhanced patient care, better understanding of medical instructions, and overall improved healthcare experiences. This study will help create a more inclusive and effective healthcare environment, fostering a greater sense of trust and understanding within the healthcare system.

Deaf Awareness Groups/Programs – the findings of this study will strengthen the efforts of deaf awareness groups by highlighting the significance of sign language proficiency among healthcare professionals. This can enhance their advocacy programs and foster collaboration aimed at improving healthcare accessibility for the Deaf and Hard of Hearing communities. Additionally, it will encourage the integration of sign language training into healthcare programs, promoting inclusivity and better patient care for the Deaf and Hard of Hearing groups.

Educators – the findings of this study will provide valuable information that can guide in more inclusive teaching approaches. It will help enhance content by integrating Basic Filipino Sign Language training into nursing, midwifery, and respiratory programs, thereby fostering better communication with Deaf and Hard of Hearing patients.

Families of Deaf individuals – this study will equip families with the assurance that healthcare professionals were proficient in Basic Filipino Sign Language, thereby enhancing communication between Deaf individuals and healthcare professionals.

Future Researchers – this study will serve as a foundation for future researchers on Filipino Sign Language training, awareness, and its integration into healthcare education. The findings encourage further exploration of the effectiveness of such training and its impact on patient care across various settings. Future research could also investigate professional nurses’ knowledge and use of Basic Filipino Sign Language; the challenges encountered in communicating with Deaf patients and compare sign language practices across different cultures to improve healthcare communication.

Healthcare Professionals – the findings support healthcare professionals in improving patient care by fostering better communication with D&HH patients, enhancing overall healthcare delivery and patient satisfaction.

Policymakers – the findings of this study may guide policymakers in creating and strengthening national frameworks that promote the inclusion of Basic Filipino Sign Language in healthcare and education. This will help ensure that communication barriers are reduced and that the rights of the Deaf and hard of hearing are upheld through supportive legislation and institutional policies.

School administrator – this study will provide valuable insights into the current level of awareness and willingness to learn Basic Filipino Sign Language among allied health students, enabling administrators to develop and implement policies, training programs, and curriculum enhancements, ensuring students are equipped with essential communication skills for inclusive health practices.

Definition Of Terms

To provide clarity and consistency in interpretation, the following terms are defined as they are used within the scope of this study.

Allied Health Students – refers to the students enrolled in healthcare programs such as Bachelor of Science in Nursing (BSN), Bachelor of Science in Midwifery (BSM), and Bachelor of Science in Respiratory Therapy (BSRT) who are trained to provide direct or indirect.

Demographic Profile – refers to the socio-academic and personal characteristics of the respondents, including age, sex, year level, and background, which may influence their perspectives and attitudes.

Age – refers to the number of years a respondent has lived, measured in years which will be analyzed to determine its impact on their awareness and willingness of Basic Filipino Sign Language.

Background – refers to the educational and personal experiences of the respondents that shape their understanding and attitudes toward Basic Filipino Sign Language.

Program – refers to the academic courses of the study leading to a degree of specific field of respondents, which include Bachelor of Science in Nursing, Bachelor of Science in Midwifery, and Bachelor of Science in Respiratory Therapy.

Sex – refers to the biological classification of respondents categorized as male and female.

Year Level – refers to the college year level group of the respondents, which will be categorized as levels I, II, III, and IV.

Filipino Sign Language – refers to the national sign language of the Deaf community in the Philippines. An instrument used by the researchers to assess the respondents' levels of awareness and willingness to learn and apply sign language.

Level of Awareness – refers to the degree of understanding and familiarity with Basic Filipino Sign Language, including its existence and purpose, role in communication, and importance in healthcare.

The existence and purpose of Filipino Sign Language – refers to students' recognition of Filipino Sign Language as an officially acknowledged language and their understanding of its function as a communication tool for the Deaf community in the Philippines.

Its role in communication with individuals who Deaf or hard of hearing – refers to the awareness of allied health students regarding the use of Filipino Sign Language as a means of communication with individuals who are Deaf or hard of hearing.

The importance of Filipino Sign Language in healthcare settings – this dimension measures how students recognize the significance and value of learning Filipino Sign Language, particularly in healthcare settings, where it facilitates inclusive and effective patient care.

Level of Willingness – refers to the degree to which allied health students are motivated and inclined to voluntarily learn and utilize Basic Filipino Sign Language in their interactions with individuals who are Deaf and hard of hearing.

Interest in Basic Filipino Sign Language – refers to the engagement and motivation of allied health students to learn Filipino Sign Language.

Communicating with Deaf individuals using Filipino Sign Language – refers to the willingness and readiness of allied health students to interact and communicate with Deaf individuals using Filipino Sign Language.

Comfort level in learning and using Basic Filipino Sign Language – refers to the degree of ease and confidence that allied health students feel when engaging in the process of learning and applying Filipino Sign Language.

Program Enhancement Plan – refers to the organized approach by the researchers to enhance the awareness and willingness of Basic Filipino Sign Language among allied health students.

REVIEW OF RELATED LITERATURE AND STUDIES

This chapter presents a comprehensive review of related literature and studies after a thorough and in-depth search done by the researchers. This will also provide a synthesis of the study to fully understand and facilitate better comprehension of the research.

Others

According to Nursing and Midwifery (2023), nurses are responsible for addressing the language and communication needs of individuals and should take appropriate measures to assist those who require help in expressing their own and others' needs. As key providers of patient-centered care, nurses must receive communication training early in their education, and this training should extend to all healthcare professionals. Effective communication skills enable nurses to engage meaningfully with patients, leading to better health outcomes and improved quality of care (Leftridge, 2022).

Gračanin (2020) highlights that Deaf individuals often turn to nurses as their first line of contact in healthcare settings. Therefore, nurses must demonstrate competence in communicating with Deaf patients, as establishing a strong nurse-patient relationship is vital for their recovery and a smooth transition through the discharge process.

The findings of Bialza et al. (2023) collectively indicate the perceptions and preferability of nursing students regarding the inclusion of Sign Language and Braille as an elective course in their curriculum. Recognizing the communication challenges faced by deaf and blind individuals in healthcare settings, the research aims to equip future nurses with vital communication skills. Using a descriptive correlational design, the study surveyed 259 Bachelor of Science in Nursing students at Far Eastern University - Dr. Nicanor Reyes Medical Foundation. A stratified random sampling method was employed to ensure representation across various year levels. The findings of the study suggest that nursing students generally have a positive attitude towards learning Sign Language and Braille. Statistical analysis using Spearman's Rank Order Correlation demonstrated a significant positive correlation between perception and preferability, suggesting a heightened awareness and deeper understanding of the advantages of these skills foster a greater willingness to acquire them. It concludes that nursing students acknowledge the importance of Sign Language and Braille in enhancing communication and patient care for individuals who are deaf or blind and are inclined to take it as an elective to enhance their therapeutic communication skills.

Midwives play an essential role in caring for pregnant women during labor and delivery, including those who are Deaf. Their responsibility extends beyond medical care to ensuring clear communication and fostering trust with expectant mothers, despite potential challenges. Building strong connections is key to effective communication and can help prevent mental health concerns and negative maternal health outcomes. As advocates, midwives must support all pregnant women, including those who are Deaf, by ensuring equitable access to healthcare. This advocacy is crucial in upholding Deaf individuals' rights, particularly their right to be understood and to receive quality maternal care. However, many midwives face challenges in fulfilling this role due to a lack of training and preparedness in communicating with Deaf patients. Language barriers can result in

misunderstandings, errors in care, and serious maternal health risks, including increased morbidity and mortality. To overcome these challenges, midwives should adopt alternative communication strategies such as visual aids, gestures, sign language, pictorial representations, and professional interpreters. These approaches help facilitate accurate and effective communication, ultimately improving maternal healthcare outcomes (Baloyi et al., 2023).

Almotery et al. (2024), emphasize in their study, the crucial role of both verbal and non-verbal communication in healthcare, particularly for respiratory students and interns. Effective communication is essential for respiratory therapists, especially when caring for patients in intensive care or those who are unconscious, as it facilitates clear and empathetic interactions. Similarly, Chavez (2024) highlights the advantages of integrating Respiratory Therapy with sign language in her future career. The motivation to engage with deaf and hard of hearing patients and their families arises from recognizing the positive impact of sign language in healthcare, such as improving patient care, fostering inclusivity, and creating a supportive environment. Furthermore, the exposure to sign language during humanities studies deepened the interest in the language and culture, allowing her to embrace it effortlessly and find empowerment in social and clinical interactions with the deaf community.

The MediSIGN developed by the UP Medical Students for Social Responsibility (UPMSSR), marks an important milestone in enhancing healthcare access for individuals with hearing impairments in the Philippines. This resource addresses the challenges that deaf individuals face in receiving proper medical care, particularly due to communication difficulties with healthcare professionals. The significance of this initiative is highlighted by the fact that many deaf individuals refrain from seeking medical help due to concerns about poor communication. The lack of sign language training among healthcare workers exacerbates this issue, leading to reluctance on both sides. MediSIGN seeks to break this barrier by offering a practical guide that includes basic FSL handshapes, movements, and specific signs for taking medical histories. This effort not only improves communication but also contributes to creating a more inclusive healthcare system for deaf individuals, ultimately enhancing their access to essential healthcare services (Encarnacion, 2024).

The study of Sintos (2020) on the psychological distress among Filipino Deaf delves into the mental health struggles experienced by Deaf individuals in the Philippines. It emphasizes that Deaf individuals are more prone to psychological distress compared to hearing individuals, mainly because of various environmental challenges. The study, which involved 120 Deaf college students, aimed to explore how self-efficacy and perceived social support might influence the connection between these environmental stressors and psychological distress. This stresses the need to acknowledge the unique social and psychological challenges faced by the Deaf community, such as stigma, discrimination, and limited mental health services. It also highlights the importance of culturally competent mental health care tailored to the Deaf community, as conventional treatments may not be suitable. In conclusion, the study advocates for further research and interventions to enhance the mental well-being of Deaf individuals, in line with the international disability rights standards.

Foreign Studies

Abushaira et al. (2023) explored how medical students' attitudes, particularly in terms of knowledge, skills, and emotional readiness, affect their comprehension of sign language. The study found that these attitudinal components significantly shape how effectively students understand and engage with sign language in clinical contexts. Students who valued the role of sign language in healthcare felt confident in their ability to learn and use it and showed emotional openness toward the Deaf community tended to perform better in sign language-related tasks. These results highlight that attitude plays a crucial role in learning success, especially in fields requiring both intellectual and emotional involvement, such as sign language. The study further showed that structured training programs strengthened the link between positive attitudes and improved learning outcomes. Students who participated in focused sign language workshops not only enhanced their practical skills but also deepened the impact of their positive attitudes on their level of comprehension. This suggests that while a favorable attitude is important, meaningful improvement in sign language skills is best achieved when paired with formal, well-designed instruction. The findings emphasize the need for both cognitive preparedness and hands-on experience to build effective communication, especially with Deaf and Hard-of-Hearing patients. Based on their findings, the researchers recommended that medical education should incorporate sign language training that goes beyond technical learning. They proposed integrating activities that foster empathy, cultural awareness, and emotional connections such as awareness drives, reflective exercises, and community

engagement with Deaf individuals. By doing so, medical and allied health programs can help students develop not only the ability to communicate in sign language but also the empathy and cultural sensitivity needed for respectful interaction. The study underscores that improving sign language understanding involves both skill development and cultivating the right attitudes, supporting a more inclusive and patient-centered approach in healthcare education.

As stated by Kung, M.S., et al (2021), cultivating a positive attitude toward sign language and the Deaf community significantly influences a learner's motivation and willingness to engage in sign language education. This favorable disposition not only promotes appreciation for Deaf culture but also enhances comprehension and communication. Attitude is shaped by various elements, including knowledge, skills, and emotional responses. In their study, knowledge is defined as the information and competencies obtained through formal education, personal experiences, and observation. This knowledge spans both practical and theoretical dimensions, which contribute to professional development, personal growth, and cultural sensitivity. It is disseminated through various platforms such as lectures, discussions, interactive activities, and written content. Their findings revealed that although most medical students (80%) were aware of the existence of the Deaf culture and community, only 63% had direct experience interacting with Deaf or Hard of Hearing (D&HH) individuals. Notably, students in their clinical years (third and fourth year) had significantly more exposure compared to those in pre-clinical years, likely due to increased patient interactions during clinical rotations. Furthermore, only 21% of the respondents had previously enrolled in a sign language course. Despite this, 86% of the students expressed a strong interest in learning American Sign Language (ASL), underscoring the importance of integrating sign language education into the medical curriculum. These findings highlight the need for medical institutions to provide more structured opportunities for students to develop communication competencies and cultural understanding to effectively serve D&HH patients.

The scoping review of "Deaf awareness programs in Health professional education" analyzed 15 studies conducted across various countries. The studies focused on university students, primarily in undergraduate programs, and involved participants from programs like pharmacy, nursing, medical, and mixed groups. Several factors were identified based on the findings, which explored Deaf awareness training, reflections on the experience, knowledge acquisition, and the impact on communication and confidence. First, the provision of Deaf awareness training emphasizes that only one study surveyed medical schools in the UK and Ireland to identify the presence of such training. However, out of 38 medical schools surveyed, 7 reported no Deaf awareness training, with some programs offering a few hours, while others spanned up to six weeks. Several programs offered certification in Sign Language or Deaf awareness training, and most involved Deaf tutors in the teaching process. Moreover, reflections on Deaf awareness training, it examines five studies that included post-training reflections. These studies primarily involved workshops where participants interacted with Deaf and Hard of Hearing individuals. The studies presented positive assessments, with participants, such as pharmacy and medical students, acquiring valuable insights into the challenges faced by Deaf patients. For instance, one study utilized role-reversal exercises where students experience healthcare as Deaf patients, leading to enhanced empathy and comprehension of the difficulties in accessing healthcare. This scoping review also explored confidence and communication, with five studies involving pre-test and post-test assessments. These studies showed that students who participated in Deaf awareness programs felt more confident in communication with Deaf and Hard of Hearing patients. For example, pharmacy students stated enhanced knowledge and confidence after participating in a six-hour course, while medical students in Germany and the USA also showed increased confidence after participating in workshops that included interactions with Deaf individuals. Finally, the review suggests that Deaf awareness training during undergraduate education is highly beneficial for allied health students. It improves their understanding of Deaf culture, enhances their communication skills, and establishes their confidence when interacting with Deaf and Hard of Hearing patients (Terry & Meara, 2024).

This study evaluates a medical education program aimed at addressing healthcare disparities faced by Deaf American Sign Language (ASL) users. Over a decade, 89 medical students participated, with 84 completing foundational seminars and 21 advancing to community-based electives. The curriculum focuses on ASL proficiency, cultural awareness, and hands-on learning through immersive activities like silent dinners and interpreter shadowing. Notable results include high completion rates (95.5% for seminars, 90.4% for electives) and minimal need for ASL remediation (4.7%), reflecting strong language support. Structural modifications, such as flexible attendance policies and the use of clear masks during COVID-18, improved accessibility. The

program empowers students to communicate empathetically with Deaf patients, fostering trust and addressing systemic barriers in healthcare. However, the acknowledgement for the need for long-term data on patient outcomes and broader curricular adoption to maximize impact. Overall, the Deaf Health Pathway (DHP) serves as a model for integrating cultural perspectives into medical training to improve health equity for marginalized communities (Narayan, et al., 2023).

Kruse et al. (2021) conducted a study involving 95 medical students aged 18 to 33 years ($M = 23.26$, $SD = 2.98$), which found that the majority had not previously interacted with Deaf or hard of hearing individuals before participating in the intervention. About 65.26% of the participants were in their clinical semesters, and 90.5% were female, highlighting the prevalent gender imbalance in German medical education. The students came from 19 different medical universities, with most from Halle, Tübingen, and Münster. Among the 53 participants who had prior experience with Deaf or hard of hearing individuals, these encounters primarily occurred in clinical environments. After attending a Deaf awareness, students gave an average rating of 1.4 on the German academic grading scale (with 1 being the highest mark, equivalent to “excellent”). The majority reported significant personal (82.1%) and professional (84.2%) benefits. Additionally, 77.9% felt more confident in interacting with patients who are hard of hearing, and 88.4% noted that the training contributed to their personal growth. The authors also highlighted a marked improvement in the participants’ understanding of Deaf culture and competence in communicating with Deaf patients following the intervention ($p < .001$). Interestingly, students in the preclinical phase, who initially demonstrated lower levels of knowledge, showed more substantial improvement and, in some cases, rated themselves more competent than those in the clinical phase.

According to Ham et al. (2020), individuals who are Deaf or Hard of Hearing (DHH) form an increasingly visible part of the population but continue to face substantial difficulties in receiving equitable healthcare, largely due to communication barriers with healthcare providers. Although the importance of training healthcare professionals in DHH awareness is acknowledged, such content is still rarely embedded within health education curricula. In response, the researchers designed an educational workshop aimed at preparing healthcare students to better serve DHH individuals, with the workshop co-facilitated by people with hearing loss themselves. The development of the workshop followed a participatory model, bringing together a medical student, DHH individuals, peers, faculty members, and support from a community organization dedicated to DHH services. The resulting pilot workshop was designed to be adaptable to various health-related programs. The program was delivered three times to a total of 49 students from ten different healthcare disciplines. Participant feedback revealed a strong level of satisfaction. Reflections from occupational therapy students, analyzed thematically, showed marked improvement in three key domains: enhanced understanding of DHH health issues, improved practical communication techniques, and strengthened attitudes such as empathy and self-awareness. Ham et al. concluded that collaborating with DHH community members as co-educators play a crucial role in developing inclusive and impactful training. Such initiatives not only improve students’ understanding of the communication needs of DHH patients but also foster more empathetic and culturally responsive care practices.

Pomeroy (2024) emphasized that early exposure to sign language has a profound impact on children’s language development. Decades of research have shown that visual-manual languages such as American Sign Language (ASL) not only help deaf and hard of hearing children develop strong linguistic skills but also offer cognitive and social benefits to hearing children. A recent pilot study from Bethel University revealed that children with early sign language exposure demonstrated greater linguistic confidence, improved vocabulary development, and more effective use of nonverbal communication compared to those without such experience. These findings support previous research indicating that introducing sign language during infancy or early childhood can strengthen neural pathways associated with language and attention. As a result, incorporating sign language into early childhood education is increasingly seen as a proactive approach to building inclusive communication skills and enhancing cognitive development, rather than merely serving as a support mechanism for children with hearing loss.

As noted by Zhang & Jiang (2024), they concluded that sign language recognition (SLR) has made notable advancements in recent years, largely due to process in deep learning techniques. As a visual-gestural language used by individuals who are deaf or hard of hearing, sign language is essential for promoting inclusivity and effective communication. The primary goal of SLR is to bridge the communication gap between the hearing-impaired and the hearing population by automating the recognition and interpretation of sign gestures. This

provides an in-depth review of recent developments in deep learning-based SLR, highlighting key areas such as sign data acquisition technologies, sign language datasets, evaluation methods, and neural network architectures. Convolutional Neural Networks (CNN) and Recurrent Neural Networks (RNN) have proven effective in recognizing fingerspelling and isolated signs, while more advanced models, including the Transformer model, have been explored for continuous sign language recognition (CSLR). Despite these advancements, several challenges persist. Expanding sign language datasets is essential for improving recognition accuracy and ensuring user independence in SLR systems. Researchers also encounter difficulties in integrating multiple input modalities, effectively fusing features, and modeling coarticulation—the seamless transition between gestures. Additionally, enhancing the semantic and syntactic understanding of sign language is a significant challenge. Another key area for future research is the development of lightweight network architecture suitable for mobile applications, enabling practical, real-world use of SLR technologies. By addressing these challenges, deep learning-based SLR can continue to evolve, further enhancing accessibility and communication for the hearing-impaired community.

As stated by Siggann (2023), the article emphasizes the importance of learning sign language in promoting inclusivity, improving communication, and fostering cultural understanding. It highlights that sign language is not merely a visual translation of spoken words but a distinct language with its own grammar and structure, deeply connected to the identity and culture of the Deaf community. Learning sign language helps bridge communication gaps, enhances accessibility, and supports advocacy for the rights of Deaf individuals, ultimately contributing to a more inclusive society. This perspective aligns with the research showing that sign language acquisition offers cognitive benefits, such as improved memory and problem-solving skills, while also fostering empathy and awareness of Deaf culture. Additionally, sign language is a valuable tool in professional settings, enabling effective communication across various fields. Integrating sign language education into mainstream curricula can significantly reduce communication barriers, ensuring that Deaf and hard of hearing individuals have equal opportunities for education and social interactions. Such efforts not only benefit the Deaf community but also enrich the broader population by expanding linguistic diversity and cultural sensitivity. Promoting sign language learning is a crucial step toward achieving a more inclusive and equitable society where all individuals can fully participate and thrive.

This article highlights the various advantages of acquiring sign language skills. One significant benefit is its role in early childhood development, as teaching infants and toddlers' basic signs can enhance parent-child communication, reduce frustration, and boost a child's confidence and self-esteem. Additionally, learning sign language can improve spatial reasoning, a crucial skill in fields such as mathematics, science, and the arts. Similar to acquiring spoken languages, sign language also provides long-term cognitive benefits, including enhanced memory, problem solving abilities, and even protection against age-related cognitive decline. These findings emphasize that beyond its primary function of facilitating communication with the Deaf community, learning sign language also contributes to cognitive development and overall personal growth, making it a valuable skill for individuals of all ages (Stenger, 2022).

Chong et al. (2021) conducted a study involving 297 community pharmacists, offering valuable insights into their demographics, communication strategies, and comfort in interacting with Deaf and hard of hearing (DHOH) patients. Most respondents were female (62.6%) and primarily aged between 30 and 39 years. Most held a Bachelor of Pharmacy degree (82%) and reported receiving fewer than five prescriptions from DHOH patients per day (63%). The findings showed that pharmacists are more comfortable communicating with them. Writing emerged as the most commonly used and preferred communication method, followed by lip-reading and sign language, though only 3.4% had even used a professional interpreter. While the choice of communication method alone did not significantly impact comfort levels, those who felt less confident were more likely to acknowledge the need for sign language training ($p = 0.004$). Additionally, institutional support was a critical factor—pharmacists without employer support demonstrated notably lower comfort levels ($p < 0.001$). Overall, the study highlights the importance of hands-on experience and organizational backing in enhancing effective communication between pharmacists and DHOH patients.

Krebs et al. (2020) explored how the age at which individuals first learn sign language, known as age of acquisition (AoA), impacts their ability to process syntax in adulthood. The study involved adults aged 28 to 58, comparing those who were native or early learners of Austrian Sign Language (exposed between ages 0–3) to

late learners (exposed between ages 4–7). While older participants generally had slower response times due to age, the more notable finding was the lasting influence of AoA. Early learners demonstrated consistently better syntactic judgment and found it easier to understand complex grammatical structures, particularly in sentences involving topicalization and classifier use. These outcomes reinforce the idea of a sensitive or critical period for language acquisition, showing that learning sign language before age five is key to developing native-like grammar skills. In contrast, even a slight delay in exposure led to enduring difficulties in syntactic processing. Overall, the research underscores that both the timing of language exposure and a person's current age can significantly affect linguistic proficiency, highlighting the need for early language access among Deaf individuals.

Parker and Igielnik (2020) describe Generation Z, those born between 1997 and 2012, as the most racially and ethnically diverse generation to date, with only 52% identifying as non-Hispanic white. Gen Z also demonstrates a higher level of educational engagement compared to previous generations; in 2018, 57% of adults aged 18 to 21 were enrolled in college. Many Gen Z individuals come from families with strong educational backgrounds, with nearly half living with at least one parent who holds a college degree. As digital natives, members of Gen Z are highly immersed in technology and social media. Approximately 95% of teens report having access to a smartphone, and most frequently use platforms such as YouTube, Instagram, and Snapchat. However, this digital saturation has brought concerns, as many Gen Z individuals recognize the negative effects of social media on their mental health and overall well-being. Socially and politically, Generation Z tends to hold progressive views. Around 70% believe the government should play a greater role in addressing societal issues, and many support movements related to racial justice, LGBTQ+ rights, and environmental sustainability. They also demonstrate openness to gender diversity; over one-third report knowing someone who uses gender-neutral pronouns, and a majority believe that gender options on official forms should go beyond the binary choices of "male" and "female." Despite these strengths, Gen Z faces considerable economic challenges. The COVID-19 pandemic significantly disrupted their financial stability, with nearly half of the oldest members reporting job losses or reduced income. Furthermore, they tend to enter the workforce later and delay financial independence, which contributes to a slower transition into adulthood. In sum, Generation Z is a well-educated, technologically adept, and socially conscious cohort, but one that must navigate economic uncertainty, mental health pressures, and evolving social norms.

The article "DEAFMed: Deaf Education and Awareness for Medical Students" emphasizes the importance of integrating Deaf awareness and communication training into medical education. Hearing loss is one of most common childhood disabilities, yet many healthcare providers remain inadequately prepared to address the unique needs of Deaf and hard of hearing (DHH) individuals. This gap in training contributes to health disparities, poor communication, and reduced quality of care for the Deaf community. To address this issue, the DEAFMed pilot program at Sidney Kimmel Medical College introduced a curriculum that included lectures on Deaf culture and American Sign Language (ASL). The program aimed to enhance medical students' cultural sensitivity and ability to communicate effectively with DHH patients. Results from pre- and post-test surveys showed a significant improvement in students' knowledge and comfort in interacting with Deaf individuals, although some gaps in specific areas remained. Overall, the study highlights the value of implementing structured educational interventions to reduce communication barriers, promote inclusivity, and improve healthcare outcomes for the Deaf community (Perlov et al., 2023).

Local Studies

Niebla (2021) conducted a study to assess awareness of hearing stakeholders in Zamboanga City's hospitality sector of Deaf culture and Filipino Sign Language (FSL). The findings indicated a general level of awareness about Deaf culture, reflected by a grand mean of 2.68. Participants recognized that Deaf individuals could be loyal, honest, and capable employees when given fair opportunities. However, their understanding of deeper cultural aspects—such as the significance of the capital "D" in Deaf as a cultural identity—was only moderate. Regarding FSL, the respondents had a slightly higher grand mean of 2.73, suggesting general familiarity. They understood that Deaf individuals communicate through gestures, writing, and facial expressions, and that FSL is taught in formal settings. Nevertheless, there was limited awareness about how Deaf people interpret non-visual sensory cues like rhythmic vibrations. The study highlighted that effective communication between Deaf and hearing individuals largely depends on the hearing person's openness and willingness to engage. Statistical

results showed no significant difference between awareness levels of Deaf culture and FSL, implying that knowledge of one often aligns with the other. To address the gaps, the study recommended implementing a training-to-employment initiative to improve both the employability of Deaf individuals and the communication competencies of hearing stakeholders, fostering a more inclusive hospitality environment.

The study found that governments worldwide are beginning to recognize Deaf communities and their need for language access to public institutions. However, there is still significant work to be done to ensure that Deaf individuals can access essential information without unnecessary barriers. The Filipino Sign Language (FSL) Act stands out among sign language laws because it includes extensive access provisions and services, a result of the persistent advocacy of Deaf leaders. In contrast, Republic Act No. 10905 lacks comprehensive services for the Deaf community, which prompted greater involvement from Deaf leadership in the development of the more inclusive FSL Act. Global Deaf communities can look to the FSL Act as a model for establishing their own sign language laws, ensuring the necessary access and services. Achieving this requires collaboration between Deaf leaders and policymakers. This study aims to inspire Deaf communities worldwide to act and advocate for similar legislation (Rogers, 2020).

The study found that sign language interpretation (SLI) education in the Philippines is implemented in diverse ways, with training programs primarily offered by private institutions, including CHED-accredited higher education institutions (HEIs) and non-CHED training-based institutions (TBIs). While both types of institutions employ experienced hearing and Deaf trainers, their curricula, evaluation methods, and assessment standards vary. The study highlights several challenges in SLI program implementation, such as differences in sign language variations, practicum and internship opportunities, a shortage of qualified sign language trainers in HEIs, limited learning resources and facilities, and the need for national standards aligned with the Philippine Qualifications Framework. Additionally, strengthening local and international linkages remains a concern. Active participation of the Deaf community in SLI training programs is crucial for providing hands-on practice and fostering cross-cultural interaction. Greater involvement of the Deaf community enhances students' ability to make ethical professional decisions and facilitate effective communication between Deaf and hearing individuals. Meeting the needs and expectations of the Deaf community requires their direct engagement in the training process. Furthermore, the study outlines key qualifications and expectations set by the Deaf community for sign language interpreters, including (a) interpersonal skills, (b) proficiency in sign language, (c) educational background, (d) ideal interpreter training programs, and (e) professional licensing and certification for career development (Madronio & Tuga, 2024).

This study introduces a gesture recognition system for Filipino Sign Language (FSL) utilizing Convolutional Neural Networks (CNN) and Long Short-Term Memory (LSTM) networks. Evaluation metrics and test results demonstrated that the CNN-LSTM model effectively identified FSL signs involving movement with high precision. The model's performance was assessed using accuracy, precision, recall, and F1-score, achieving a classification accuracy of 98%. Additionally, the validation and test sets yielded comparable results, with the validation set attaining 97.62% accuracy and a 0.0839 loss, while the test set recorded 97.29% accuracy and a 0.0827 loss, indicating a well-fitted model with strong generalization capabilities. To optimize performance for resource-limited devices, the model underwent Post-Quantization and Quantization-Aware Training, resulting in lightweight versions. The findings confirmed that all three model variations maintained high accuracy and low loss, enabling real-time FSL gesture recognition suitable for digital applications and dedicated hardware, such as government service centers and banks. However, the study also revealed that certain CNN-LSTM model variations were more appropriate for development depending on the environment and available hardware. Future research will focus on conducting a comprehensive ablation study to further analyze the contributions of different model components, enhancing the model's robustness and applicability in real-world scenarios (Cayme, et al., 2024).

In a study conducted by Choo, Jimenez, Kojima, and Morada (2021), the relationship between personal and work-related characteristics of employees and the extent of FSL use in the workplace was explored. Among the personal characteristics tested, sex was explicitly examined for its potential influence. However, the results revealed that sex did not show a statistically significant effect on the extent of FSL use, suggesting that male and female Deaf employees reported similar levels of FSL utilization across workplace contexts. These findings challenge traditional assumptions that gender might inherently affect communication behaviors or preferences.

It also aligns with the study's broader conclusion that factors such as network presence, organizational size, and educational attainment exert a stronger influence on FSL use than sex alone. The researchers noted that while sex showed no observable effect in their dataset, the limited sample size might have impacted the statistical power of the analysis, leaving room for future research to further examine this relationship in more diverse or representative populations. The study underscores the importance of focusing beyond sex-based assumptions when designing programs to enhance FSL integration. Instead, fostering inclusive workplace environments and establishing support systems like Deaf networks may yield more impactful results than targeting interventions based on gender.

This study concluded that promoting Filipino Sign Language (FSL) as an integral part of daily life is crucial for fostering true inclusion and effective communication with the deaf community. The Department of Social Welfare and Development in Region 7 (DSWD7) emphasized that learning and using FSL should go beyond interactions with the deaf individuals and should be driven by a genuine commitment to inclusivity and accessibility. To support this, DSWD7 conducted training for staff in Centers and Residential Care Facilities (CRCFs) to develop more advocates, learners, and practitioners of FSL. By starting with basic greetings and incorporating engaging, creative sign language activities, participants were encouraged to integrate FSL into their everyday interactions, promoting a more inclusive society. This initiative aligns with Republic Act No. 11106, which designates FSL as the national sign language of the Filipino Deaf and mandates its use in government transactions, education, broadcast media, and workplaces. Through continued advocacy, this study underscores the importance of sustained learning and widespread adoption of sign language to dismantle communication barriers and uphold rights of the deaf community (Tista, 2024).

As stated by Daculan et al. (2022), their study found out that despite Filipino Sign Language (FSL) being officially recognized as the national sign language under Republic Act 1106, there remains a widespread lack of awareness and understanding of the deaf community in the Philippines. This issue is illustrated by the case of Mininio Buhat, a deaf individual who was subjected to cyberbullying due to misconceptions about how deaf people structure written language based on sign language usage. The study emphasizes that the communication gap between hearing and non-hearing individuals continues to perpetuate prejudice and misinformation. To address this issue, the study explores the application of pattern-searching algorithms, Knuth-Morris Pratt, Boyer-Moore, and Rabin-Karp in a digital tool called Zee, designed to facilitate FSL learning. This application allows users to input English words, which are then matched with corresponding FSL gestures in GIF format. By evaluating the efficiency of these algorithms in terms of time complexity, space complexity, and overall performance, the study concluded that the Boyer-Moore algorithm consistently delivered the most efficient results across different test cases. Furthermore, the study highlights the critical role of inclusive education and advocacy efforts led by organizations such as the National Council on Disability Affairs (NCDA), Mandaue City Central Special Education School (MCCSpEd), and the Philippine Accessible Disability Services Inc. (PADS). These institutions are instrumental in promoting FSL training and raising awareness to combat the societal stigma experienced by the deaf and hard-of-hearing community.

Following the work of Osorio and colleagues (2024), the researchers developed WiKA, a computed vision software designed to recognize Filipino Sign Language (FSL) by tracking hand joint positions using a markerless pose estimation Hand-Joint Tracking model built with DeepLabCut. The study validated the effectiveness of DeepLabCut in hand joint tracking, highlighting its potential not only for sign language recognition but also for broader applications in gesture recognition. The findings demonstrated the software's ability to accurately recognize the alphabet (A-Z) and numbers (1-9), with measurable results in precision, recall, and F1-score. This functionally offers a valuable tool for facilitating communication between signing and non-signing individuals, allowing the latter to understand basic FSL characters without prior knowledge of the language. The development of WiKA contributed significantly to the field of Sign Language Recognition (SLR) and computer vision. Key achievements included the creation of an advanced Hand-Joint Tracking Model using DeepLabCut, which improved precision in gesture tracking and set a foundation for future applications. The FSL recognition system, leveraging extracted hand joint features, demonstrated practical applications in sign language interpretation, enhancing features, demonstrated practical applications in sign language interpretation, enhancing accessibility for the FSL community. Additionally, integration with Google Colab improved scalability, while a user-friendly Graphical User Interface (GUI) captured these models, reinforcing the study's impact. Overall,

these advancements not only enriched academic discussions but also demonstrated real-world potential in promoting inclusiveness and improving communication for the FSL community and beyond.

This study emphasized the importance of promoting and integrating Filipino Sign Language (FSL) to ensure that deaf individuals are not excluded from society. DSWD-7's advocacy for FSL seeks to encourage more learners, practitioners, and advocates to bridge communication gaps and enhance accessibility for the deaf community. Under Republic Act 11106, FSL is mandated for use in government transactions, schools, workplaces, and broadcast media, solidifying its status as the national sign language of the Filipino deaf. To support this initiative, DSWD-7 organized Basic Sign Language training in Cebu, specifically for staff in Centers and Residential Care Facilities (CRCFs). The training underscored the critical role of FSL in communication with vulnerable groups, such as deaf children, women, and persons with disabilities (PWDs), who often have limited access to formal sign language education. FSL is particularly beneficial in rehabilitation efforts, including assessment, counseling, and daily interactions, ensuring that deaf individuals receive proper support. DSWD-7 Regional Director Shalaine Marie S. Lucero stressed that learning FSL should extend beyond the necessity and become a part of everyday life, motivated by genuine concern and inclusivity. She urged both center-based staff and the public to practice FSL actively, starting with basic greetings and simple conversations, to foster meaningful connections with the deaf community (Palaubsanon, 2024).

Based upon the findings of Jetomo & De Lara (2025), their study found that the growing population of deaf and hard-of-hearing individuals poses significant communication challenges, largely due to the absence of formally implemented programs supporting Filipino Sign Language (FSL). While deep learning techniques have shown promise in FSL recognition, they still face challenges such as high computational demands, limited transparency, and the need for extensive datasets. To address these issues, the study investigated the potential of topological data analysis (TDA), specifically the Persistent Homology Classification Algorithm (PHCA), as an alternative method for FSL recognition. PHCA was compared with traditional classifiers like Support Vector Machine (SVM) using both balanced and imbalanced datasets. Results showed that PHCA achieved an average accuracy of 99.45%, comparable to SVM's 99.31%. Further analysis demonstrated PHCA's resilience to data perturbation and noise, making it a promising alternative for FSL recognition. However, the study also identified that PHCA struggled with distinguishing signs that involved similar gestures, a common issue in FSL recognition. Despite this drawback, the findings indicate that PHCA offers a computationally efficient and interpretable approach for recognizing FSL, highlighting its potential for further advancements in sign language technology.

Based on the findings of Meimban et al. (2024), they concluded that a Filipino Speech-to-Sign Language system, developed using a MATLAB-based program, can accurately recognize intelligible Filipino speech and translate it into corresponding sign language. The system aims to facilitate communication between individuals with hearing impairments and the hearing community, enabling better expression of thoughts and emotions. The research team successfully designed a speech recognition system with an agreed-upon accuracy rate of 85%, based on multiple trials. It was found that achieving this level of accuracy required a minimum of 20 recordings per training session, with additional recordings further enhancing the system's reliability. To assess its effectiveness, a series of tests were conducted at My Children's House of Hope, Bahay Bata 127, and Payatas B Elementary School, with 44 tests performed in each gender. The results demonstrated the system's potential for practice use in bridging communication barriers for the deaf and hard of hearing community. This study underscores the need to refine speech recognition models and expand training datasets to improve the system's accuracy and overall usability.

Further research found that incorporating batch normalization and gradient clipping significantly improved the performance of 3D Convolutional Neural Networks (3D CNNs) for dynamic Filipino Sign Language recognition. By stabilizing gradients, the variance decreased from 366.8836 to 4.9723, resulting in enhanced accuracy and generalization. To further address overfitting, additional techniques such as dropout regularization, weight decay, and early stopping were explored. These methods helped prevent excessive reliance on specific neurons, reduced co-adaptation, and ensured training was halted before overfitting occurred. The integration of these strategies led to a more resilient and generalized recognition system, emphasizing the importance of optimizing deep learning architectures for sign language applications. These findings suggest the potential for further advancements in dynamic sign language recognition through improved regularization and optimization techniques. By enhancing the robustness and reliability of recognition systems, this research contributes to more

effective communication technologies, ultimately supporting inclusivity and accessibility for the deaf and hard of hearing community (Bisoy & Oduca, 2024).

Filipino Sign Language (FSL) studies have mostly centered on lexicography and sociolinguistics, with limited attention to syntax. This study addressed the gap by applying Systemic Functional Linguistics to FSL through interviews with Deaf senior high school students. Findings showed that FSL serves as the natural language of the Deaf community, reflecting Filipino culture, traditions, and values. Linguistically, it demonstrated unique verb usage, word order patterns, and diverse sign types, including iconic, arbitrary, and classifier signs supported by facial and non-manual markers. Using Systemic Functional Linguistics' meta functions, the study revealed interpersonal features (e.g., honorifics), textual elements (e.g., spatial grammar, cohesive devices), ideational aspects (e.g., symbolic and metaphorical signs). The study emphasized the role of FSL in inclusive education and interpreter training, recommending further research on classifier constructions, iconicity, and the impact of the Filipino Sign Language Act (Tabingo & Lovitos, 2025).

Studies show that the Generation Z Deaf community continues to face significant challenges in education, particularly in relation to the use and recognition of Filipino Sign Language (FSL). While FSL serves as their primary medium for communication, identity, and connection, there remains a substantial gap in the services and support provided to Deaf learners in mainstream education. Research emphasizes that despite the passage of Republic Act 11106, which officially recognizes FSL, issues such as limited access to trained interpreters, insufficient educational resources, and lack of inclusive teaching strategies persist. Qualitative findings further reveal that Deaf students often struggle with complex tasks, communication barriers with non-PWDs, and inadequate institutional support. Nevertheless, these challenges have also fostered resilience, unity, and advocacy within the Deaf community, particularly among Generation Z members, who actively work together to promote inclusivity and equal educational opportunities. The study highlights that collaboration among government institutions, educators, NGOs, and society at large is essential to address these gaps and create equitable and supportive learning environments for the Deaf community (Quinan et al., 2024).

The creation of a Sign Language curriculum is a relatively recent effort, implemented by only a limited number of countries to establish a national standard sign language as a first language (L1) or mother tongue in educational settings. Sign language is treated as a mandatory subject for Deaf students, allowing them to develop metalinguistic skills in a manner similar to the acquisition of spoken languages as L1. Such curricula not only encourage active use of the language but also provide explicit linguistic knowledge, helping students understand the functional aspects of Sign Language, make stylistic and meaningful choices, and enhance overall comprehension. This underscores the significant role of sign language literacy in supporting the comprehensive development of Deaf learners. While conventional literacy focuses on reading and writing, language curricula typically encompass five core early literacy elements: comprehension, phonological awareness, phonics, knowledge of print conventions, and fluency. Within this framework, sign language literacy is recognized as a verbal, non-print form of literacy, with the evidence drawn from documentary studies that compare sign language and indigenous educational curricula (Mertzani, 2022).

The article concluded that Filipino Sign Language (FSL) has been officially recognized as the country's national sign language through Republic Act No. 11106, also known as the Filipino Sign Language Act of 2018. This law mandates the use of FSL as the primary mode of communication in government transactions involving individuals who are deaf or hard of hearing. However, Dean Edward A. Dimaguila pointed out that there is no universal sign language, as gestures and signs differ across countries. Sign language interpreter–Jordan S. Madronio encouraged attendees to go beyond textbook learning, emphasizing that sign languages continuously evolve with the emergence of new signs. Learning FSL also demonstrates an institution's commitment to fostering an inclusive workplace that upholds equal opportunities and respects diversity, ensuring "everyone's voice is heard regardless of their abilities," the director stated. Dimaguila further highlighted that the deaf community has its own distinct culture and language, which may not align with conventional practices of hearing individuals. Recognizing these differences is essential in building a truly inclusive environment (Department of Science and Technology, 2023).

The article concluded that in the Philippines, a country with over 180 languages, the Filipino deaf community continuously adapts to new words to make sign language more inclusive. According to Elyse Aquino in Deaf

and Terp, sign language interpreter Bayani Generoso shared his experience of moving to Bicol after living in Canada for 30 years, where locals struggled to understand his ASL. For example, the ASL sign for “coconut” is a simple gesture of forming a circle with the hands and shaking it near the head. However, since Filipinos engage with coconuts in various ways, multiple FSL signs have developed—one mimics husking a coconut, while another represents plucking a coconut from a tree using one’s arm as a trunk. Despite having established signs, FSL remains a dynamic language that evolves with time. Just as people adapt to the ever-changing vocabulary of the internet, the Filipino deaf community actively discusses and creates new signs for emerging concepts like “Twitter,” “Instagram,” and “view.” Beyond digital terms, the community has also developed signs related to the coronavirus pandemic. FSL is deeply influenced by Filipinos’ distinctive use of body language. As Generoso observed, Filipinos naturally communicate with gestures, including pointing with their mouth and using visual cues to express ideas. In essence, FSL is like painting pictures with the body to convey meaning (Rappler, 2020).

Filipino Sign Language (FSL) is the officially recognized national sign language of the Philippines, granted legal status through the Filipino Sign Language Act in 2018. It remains an understudied deaf community sign language in Southeast Asia, with variations observed at national, local (community), and domestic (home) levels. According to the Philippine Statistics Authority (PSA), there were approximately 1,784,690 individuals with hearing difficulties in 2020. These individuals come from diverse communities across the country and are often born into hearing families, where they initially develop home signs. Deaf children formally learn FSL in elementary school, engaging in both deaf-to-deaf and deaf-to-hearing interactions. Negative perceptions of deafness persist, and deaf children are frequently expected to adapt to hearing environments. Notarte- Balanquit emphasized the need for change, stating, “We want to provide the Filipino Deaf Community with an education grounded in their language... and recognize that Filipino Sign Language is an essential part of their deaf identity. This is why research on the structure and variation of FSL is both urgent and necessary.” Currently, she is analyzing the data collected in the previous year from 120 signers in Palawan, Samar-Leyte, and southern Mindanao for statistical evaluation. Her research specifically explores how numbers and negation are expressed in FSL. She identified three main factors contributing to the variation in FSL numerals: (1) the availability of iconic signs, (2) the historical influence of other languages on FSL, and (3) the difference in communication partners that signers interact with. Among her observations, she noted that numeral formation employs multiple strategies, such as borrowing less iconic signs for ‘6–10’ from American Sign Language (ASL), using a lexical basis for ‘100’ (signing ‘1’ and a ‘C’) and ‘1000’ (palm touch), applying initialism for ‘million’ (‘M’ + palm touch), and incorporating simultaneous movements for ‘16–19’ from ASL. Additionally, larger numbers tend to offer more variation due to increased options for combining features. Furthermore, signed numerals can be classified based on morphological transparency, referring to how numerical components are structured and expressed in FSL (Department of Linguistics – UP Diliman, 2023).

According to See (2022), this article determined that hiring Filipino Sign Language (FSL) interpreters is essential to promoting accessibility and inclusivity for individuals with hearing impairments during city government events and public engagements. In response, city officials have instructed the City Human Resource Management Office (CHRMO) and the Persons with Disability Affairs Office (PDAO) to work with key agencies, including the Department of Budget and Management (DBM), and the Civil Service Commission (CSC), to define the technical requirements for employing FSL interpreters. Through Resolution No. 133, series of 2022, city legislators recognized prior recommendations from disability affairs officials regarding the enforcement of Ordinance No. 86, series of 2019. This ordinance mandates the provision of FSL interpreters to support individuals with hearing impairments during significant city government activities. While interpreter services are currently arranged through alternative means, efforts are underway to secure DBM and CSC approval for a permanent plantilla position dedicated to FSL interpretation, ensuring sustained accessibility and compliance with Republic Act No. 11106. Additionally, the law promotes collaboration between the PDAO, local deaf communities, accredited organizations, and professional FSL interpreters to establish technical standards for interpreter qualifications. This partnership plays a crucial role in setting selection criteria and assisting the personnel evaluation board in recruiting skilled interpreters capable of bridging communication gaps for the deaf and hard-of-hearing community.

As highlighted by the Supreme Court of the Philippines (2024), the groundbreaking of the Supreme Court to take initiatives to develop the first-ever Rules on Filipino Sign Language (FSL) Interpreting in the Judiciary, marking a crucial step toward ensuring equal access to justice for the deaf and hard of hearing community in the

Philippines. Anchored in Republic Act No. 11106, also known as the Filipino Sign Language Act, this initiative reflects the government's commitment to safeguarding the rights of persons with disabilities by enabling their meaningful participation in legal proceedings. The formulation of these rules seeks to establish standardized qualifications and ensure the availability of FSL interpreters in judicial settings, addressing communication barriers that often impede the deaf community's full engagement in legal processes. The Technical Working Group (TWG), chaired by the Associate Justice Japar B. Dimaampao with Associate Justice Jose Midas P. Marquez, as Vice Chairperson, convened for its inaugural meeting, bringing together justices, court officials, government representatives, and members of the deaf community. Their collaborative discussions emphasized the need to refine the proposed rules for effective implementation. This initiative is a key milestone in the judiciary's Strategic Plan for Judicial Innovations 2022-2027 (SPJI) and reinforces broader efforts to promote inclusivity, fairness, and accessibility in the legal system for all Filipinos, regardless of their hearing abilities.

This literature asserts that while the Filipino Sign Language (FSL) Act has established a legal basis for recognizing FSL as the national sign language, additional efforts are necessary to enhance its widespread adoption and cultural significance. Advocates from the deaf community, including Shaquille de Guzman, highlight that FSL is more than just a communication tool—it is a vital part of their identity and heritage. De Guzman's recognition at the 2024 Komisyon sa Wikang Filipino's Gabi ng Parangal for his FSL poetry underscores the increasing appreciation of FSL in artistic and linguistic domains. However, he and other advocates emphasize that the deaf community must take the lead in promoting and teaching FSL to ensure accessibility and inclusiveness. Although legal provisions mandate the use of FSL in government transactions, gaps remain in its implementation and broader societal recognition. Ongoing advocacy, driven by the deaf community, is essential in preserving their language, fostering inclusivity, and upholding their rights (Ong, 2024).

According to Choo et. al (2021), they found out that while certain workplace factors significantly influence the use of Filipino Sign Language (FSL) among Deaf employees, broad generalizations cannot be drawn due to the limited and non-representative data set. Instead, the findings serve as a foundation for raising awareness about employment challenges and workplace accommodation for the Deaf community, encouraging further research. Key factors such as job nature, educational background, industry, professional networks, and company size were found to have a statistically significant impact on FSL use. Conversely, demographic factors like age, sex, and company policies or advocacy initiatives showed no notable influence. A strong positive correlation was identified between FSL use and the quality of interpersonal relationships at work, underscoring its role in fostering inclusivity and support. These results highlight the importance of aligning job roles with the strengths and needs of Deaf employees while promoting an inclusive culture among hearing colleagues. By prioritizing communication and accessibility, employers can take meaningful steps to ensure that Deaf employees receive the necessary support to succeed professionally.

As stated by Montezor (2024), Filipino Sign Language (FSL) is officially recognized as the primary language of the Deaf community in the Philippines. However, it remains largely inaccessible to most Filipinos. Despite its historical and cultural significance, fluency in FSL is primarily limited to Deaf individuals and special education (SPED) teachers. While FSL has significantly improved communication within the Deaf community, the general population still faces challenges in understanding and using it. Although laws like Magna Carta for Disabled Persons (RA 7277) mandate the integration of persons with disabilities into mainstream society, including education, FSL remains underutilized despite policies from the Department of Education (DepEd) promoting inclusive learning. To bridge this gap, the Rotaract Club of PUP San Juan introduced "Connecting through the Sign," a Basic Sign Language workshop designed to promote inclusivity and raise awareness of FSL. This initiative, which engaged Rotaractors and PUP San Juan students, highlights the importance of fostering an educational environment where all learners, regardless of ability, can thrive. By increasing FSL awareness and accessibility, programs like this contribute to a more inclusive society, helping Deaf individuals integrate more seamlessly into daily life and education.

The Department of Education (DepEd) has reinforced its commitment to inclusivity through the celebration of the 2023 National Deaf Awareness Week (NDAW) with the theme "Promote Safe and Inclusive Education: Filipino Sign Language (FSL) and other means of Communication towards a Resilient Future." The initiative, led by the Bureau of Learning Delivery, Student Inclusion Division, highlights the use of FSL as a recognized

medium of instruction for Deaf learners, in line with the Republic Acts 11106 and 11650, as well as the MATATAG Agenda that advances quality and inclusive education. This program also aligns with the United Nations' 2030 Sustainable Development Goals, situating FSL and disability inclusion as essential components of national development. The kickoff event featured discussions on the Universal Newborn Hearing Screening and Intervention Act, interpreter guidelines, court interpreting protocols, and inspiring testimonies of Deaf individuals, emphasizing both policy directions and lived experiences. Moreover, student-centered activities such as poster-making and FSL-based blogs were conducted to foster awareness, participation, and pride among Deaf learners (Department of Education, 2023).

Synthesis

The collective insights from both foreign and local literature strongly affirm the growing importance of sign language education and Deaf awareness in health-related fields and broader societal contexts. International studies emphasize that effective sign language acquisition among healthcare students is influenced by a combination of positive attitudes, emotional readiness, and structured educational exposure (Abushaira et al., 2023; Kung et al., 2021). Students who approach Deaf culture with openness and participate in formal instruction, such as workshops and clinical immersions, tend to develop greater competence and empathy in communicating with Deaf and Hard of Hearing (D&HH) individuals (Kruse et al., 2021; Narayan et al., 2023). Furthermore, involving Deaf educators and communities enhance cultural sensitivity and support a more inclusive, patient-centered healthcare environment (Ham et al., 2020; Terry & Meara, 2024).

Despite increased interest among students, several studies reveal persistent gaps in medical education programs where sign language and Deaf culture remain underrepresented (Terry & Meara, 2024; Chong et al., 2021). These findings highlight the need for institutional reforms, professional interpreter support, and employer-driven initiatives to normalize inclusive communication practices. Additionally, research underlines the broader benefits of sign language learning, including enhanced cognitive, linguistic, and problem-solving abilities, even for hearing individuals (Pomeroy, 2024; Stenger, 2022). Technological developments, such as sign recognition systems using AI and machine learning (Zhang & Jiang, 2024), offer new tools to support communication but face challenges in semantics and real-world deployment.

Local literature echo's similar themes, emphasizing both progress and remaining barriers in the implementation of Filipino Sign Language (FSL) in the Philippines. Since the passage of Republic Act No. 11106, efforts across legal, educational, and technological sectors have aimed to maintain FSL in public life. However, studies like those by Niebla (2021) show that while general awareness exists, deeper understanding of Deaf culture remains limited, especially in everyday professional interactions. Research by Tista (2024) and Palaubanon (2024) supports government-led FSL training but stresses the need for these programs to extend into routine practice.

Advocacy-based studies (Rogers, 2020; Daculan et al., 2022) emphasize the pivotal role of Deaf leadership in shaping inclusive policy, highlighting the importance of sustained collaboration between Deaf communities and decision-makers. Meanwhile, Madronio and Tuga (2024) identify challenges in FSL interpreter training, such as curriculum inconsistencies and a lack of national standards, calling for more inclusive and standardized educational frameworks that actively involve the Deaf sector.

In the workplace, Choo et al. (2021) found that job type and educational attainment affect the use of FSL more than demographic factors, suggesting that structural and environmental factors are key in fostering effective communication. Technological solutions, including AI-based FSL recognition tools (Cayme et al., 2024; Jetomo & De Lara, 2025), are making strides but still require refinement to overcome limitations like gesture ambiguity and resource-intensive deployment. Additional algorithm-focused studies (Daculan et al., 2022; Oduca & Bisoy, 2024) propose scalable innovations to improve FSL learning and accessibility.

Across both foreign and local contexts, a recurring concern is the persistent communication gap between hearing and Deaf communities driven by stigma, limited training, and social exclusion. Scholars widely agree that the Deaf community must not only be included but empowered as key contributors to inclusive educational, technological, and healthcare systems.

In conclusion, while global and Philippine-based research acknowledges substantial progress in promoting sign language, they also point to the need for deeper, sustained efforts. These include intersectoral collaboration, Deaf-led advocacy, reforms in interpreter education, inclusive work environments, and investments in supportive technology. Together, these strategies aim to establish sign language not merely as a legal requirement but as an integral tool for equity, inclusion, and human dignity in both clinical and everyday contexts.

RESEARCH METHODOLOGY

This chapter outlines the methods and procedures employed to collect the necessary data for the study. It contains the research design, the research locale, sources of data, population of the study, research instruments to be used, with its construction and validation of the instruments, data gathering procedures, and statistical treatment. These components ensure the systematic and reliable conduct of the research, providing a solid foundation for meaningful and accurate findings.

Research Design

This study was quantitative research that systematically collected and analyzed data to assess the level of awareness and willingness to learn Basic Filipino Sign Language among allied health students, specifically Bachelor of Science in Nursing (BSN), Bachelor of Science in Midwifery (BSM), and Bachelor of Science in Respiratory Therapy (BSRT) students. As stated by Sreekumar (2024), quantitative research involves gathering and analyzing numerical data to describe, predict, or manage specific variables. Moreover, this study will employ both descriptive-comparative and correlational designs to determine the respondents' demographic characteristics and their level of awareness and willingness to learn Filipino Sign Language. Additionally, it will compare the differences in awareness and willingness across various demographic groups. As defined by Iranifard & Latifnejad Roudsari (2022), a descriptive-comparative research design involves analyzing the similarities and differences between two or more variables. Its primary objective is to describe, investigate, and explain these similarities and differences. Whereas a correlational design is a research design that is used to explore the relationships between two or more variables within single groups, which may occur at different levels (Devi et al., 2023).

Through this methodological approach, the study sought to generate evidence-based insights that could inform the development of specific interventions and improvements aimed at integrating Filipino Sign Language into healthcare education. In addition, employing these research designs enabled the identification of any significant associations between the students' demographic profiles and their awareness and willingness to learn Basic Filipino Sign Language. The findings provided a strong basis for making informed recommendations to enhance curriculum planning, training workshops, and implement awareness campaigns or programs within the institutions.

Research Locale

The study was conducted at Mary Chiles College, a private, non-sectarian institution established in 1913. This academic institution provided a distinctive opportunity to assess the awareness and willingness to learn Basic Filipino Sign Language among its allied health students. Renowned for its commitment to excellence, the institution upheld core values of competence, compassion, and discipline while delivering holistic methodologies and fostering a person-centered approach to learning. With its strong academic standing, Mary Chiles College aspired to rank among the country's top institutions by 2030, producing highly employable graduates equipped with the necessary skills to excel in their fields. The college offered three-degree programs: Bachelor of Science in Nursing (BSN), Bachelor of Science in Midwifery (BSM), and Bachelor of Science in Respiratory Therapy (BSRT). Conducting this study within this institution provided valuable insights that could inform curriculum enhancements, training programs, and institutional policies, ensuring that graduates were equipped with the skills to deliver equitable and patient-centered care.

The findings of this study not only enhanced academic discussions on communication in healthcare but also supported the institution in its mission to prepare future healthcare professionals. By fostering a strong sense of awareness and willingness to learn Basic Filipino Sign Language, the study promoted inclusivity and

accessibility for individuals with hearing difficulties. Ultimately, the study contributed to a broader understanding of the importance of communication skills in improving patient care and outcomes.

Sources of Data

This study gathered information through a survey questionnaire administered to allied health students enrolled in the Bachelor of Science in Nursing (BSN), Bachelor of Science in Midwifery (BSM), and Bachelor of Science in Respiratory Therapy (BSRT) programs at Mary Chiles College. The data collected from their responses served as the primary source of information for assessing their level of awareness and willingness to learn Basic Filipino Sign Language.

Population and Sampling Procedure

The sample size of this study comprised 257 allied health students from diverse academic programs who were enrolled during the second semester of the academic year 2024–2025 at Mary Chiles College. This included 203 Bachelor of Science in Nursing (BSN) students, 37 Bachelor of Science in Midwifery (BSM) students, and 17 Bachelor of Science in Respiratory Therapy (BSRT) students. These students represented a diverse group of future healthcare professionals who would play a crucial role in delivering patient care across various settings. By assessing their levels of awareness and willingness to learn Basic Filipino Sign Language, the study sought to identify key areas for proposing curriculum program interventions.

Based on the most recent enrollment data, a total of 715 allied health students were enrolled in these three programs for the second semester of the academic year 2024–2025, distributed as follows: 564 Bachelor of Science in Nursing (BSN) students, 102 Bachelor of Science in Midwifery (BSM) students, and 49 Bachelor of Science in Respiratory Therapy (BSRT) students. The study employed a stratified random sampling technique to ensure fair and proportional representation of students across all academic programs and year levels. According to Bisht (2024), stratified random sampling is a technique where researchers divide large populations into subgroups, or strata, and then randomly select samples from each stratum, thereby ensuring that every subgroup is adequately represented. In this study, the population was initially divided by academic program, and each program was further divided by year level. This process guaranteed that the sample reflected not only the distribution of programs but also the correct proportion of students across each year level within those programs. For instance, Bachelor of Science in Nursing (BSN) students were grouped from first year to fourth year, and the same stratification was applied to Bachelor of Science in Midwifery (BSM) and Bachelor of Science in Respiratory Therapy (BSRT). Participants were then randomly selected from each subgroup in proportion to their actual numbers. This approach minimized sampling bias and enhanced the validity of the findings by ensuring balanced representation of program-year combinations. Proportional representation was significant for the study's objective, which was to assess the awareness and willingness of allied health students towards Basic Filipino Sign Language (BFSL) and relate these findings to their demographic characteristics and significant differences between groups. The study efficiently utilized stratified random sampling in the data collection process so that it accessed a credible source from different program- year level cohorts. Consequently, this study resulted in better understanding of BFSL awareness and willingness concerning health education.

Students who met the following inclusion criteria and voluntarily consented to participate were invited to complete the survey: (1) those currently enrolled in the Bachelor of Science in Nursing (BSN), Bachelor of Science in Midwifery (BSM), or Bachelor of Science in Respiratory Therapy (BSRT) programs at Mary Chiles College during the second semester of the academic year 2024–2025, and (2) those who agreed to participate in the study and provided informed consent.

Prior to the main data collection, a pilot test of the researcher-made survey questionnaire was conducted with a small group of 30 students to evaluate the clarity, reliability, and validity of the tool. The findings from the pilot test helped identify uncertainties or areas for improvement in the ques, ensuring that it accurately measured students' awareness and willingness regarding Basic Filipino Sign Language.

Once the sample was selected, respondents were invited to complete the structured questionnaire, which was designed to evaluate their levels of awareness and willingness to learn Basic Filipino Sign Language. Participation was voluntary, and the anonymity and confidentiality of all respondents were assured.

Research Instruments

The study utilized a researcher-made survey questionnaire to assess the level of awareness and willingness to learn Basic Filipino Sign Language among allied health students in Bachelor of Science in Nursing (BSN), Bachelor of Science in Midwifery (BSM), and Bachelor of Science in Respiratory Therapy (BSRT) programs. This instrument is developed based on the study’s statement of the problem and a comprehensive review of related literature from the study of “The Impact of Attitudes related to Knowledge, Skills, and Emotion on the Understanding of Sign Language among Medical Students” by Abushaira et al. (2023), “Assessing Medical Students’ Knowledge of the Deaf Culture and Community in Puerto Rico: A Descriptive Study” by Kung et al. (2021), “The Importance of learning sign language.” by Siggann (2023), “A scoping review of Deaf awareness programs in Health professional education” by Terry & Meara (2024), “Filipino Sign Language Skills and Deaf Culture Awareness in Hospitality Industry Employability” by Niebla (2021), “The Filipino Sign Language Act in the Philippines: Policy Analysis” by Rogers, “A Proposed Curriculum Framework for Filipino Sign Language Interpretation Program in Tertiary Program” by Madronio & Tuga (2024), “Use of Filipino sign language pushed” by Ong (2024), and “Connecting through the sigh: Filipino Sign Language workshop promoting inclusivity and safe spaces community” by Montezor (2024).

The questionnaire consisted of fifty-nine (59) items and was structured into three main parts, each addressing the research objectives. To ensure clarity, inclusivity, and cultural appropriateness, the questionnaire was prepared in English and translated into Filipino. This allowed respondents to select the language they were more comfortable with, which minimized misinterpretation of questions and encouraged more accurate responses. The translation process underwent expert review to preserve the accuracy of meaning in both languages.

A four-point Likert scale was employed to measure the respondents’ level of awareness and willingness, as well as the frequency of their responses. The survey questionnaire was distributed together with an approval letter, which also served as a written consent form, ensuring voluntary participation and ethical compliance.

The first part of the questionnaire focused on the respondents’ demographic profile. It collected essential background information such as age, sex, program, year level, and prior exposure to Filipino Sign Language. These variables were included to provide a basis for analyzing differences in the students’ awareness and willingness to learn Filipino Sign Language. Furthermore, the demographic profile allowed the researchers to determine whether certain factors, such as academic program or previous experience with sign language, had an influence on the respondents’ perspectives and attitudes toward learning Filipino Sign Language.

The second part of the questionnaire assessed the respondents’ level of awareness in Basic Filipino Sign Language. This part was composed of thirty (30) items that examined their understanding of its existence and purpose, its role in communicating with individuals who are Deaf or hard of hearing, and its importance within healthcare settings. The scale includes the following response options: fully aware (FA), moderately aware (MA), slightly aware (SA), and not aware (NA).

Table 1: Four-Point-Likert-Scale

4 Fully Aware (FA)	3 Moderately Aware (MA)	2 Slight Aware (SA)	1 Not Aware (NA)
Fully aware of Filipino Sign Language (FSL)	Aware of FSL but with limited exposure	Has minimal awareness of FSL	Completely unawareness of FSL

The third part of the questionnaire assessed the respondents’ willingness to learn Basic Filipino Sign Language by measuring their motivation and readiness to acquire new communication skills. This part consisted of twenty-nine (29) items that explored their openness to attend workshops, participate in seminars, and support the

integration of Filipino Sign Language into the academic curriculum. Responses were evaluated using four-point Likert scale with the following response options: very willing (VW), somewhat willing (SW), slightly willing (SW), and not willing (NW), which provided a structured means of determining the extent of their willingness and interest in incorporating Filipino Sign Language into their future roles as healthcare professionals.

Table 2: Four-Point-Likert-Scale

4 Very Willing (VW)	3 Somewhat Willing (SW)	2 Slightly Willing (SW)	1 Not Willing (NW)
Very willing to learn and use FSL in communication	Open to learning and using FSL but with some reservations	Willing to learn FSL but with significant hesitation or reluctance	Not willing to learn or use FSL in communication

The inclusion of both English and Filipino versions of the questionnaire further ensured that respondents fully understood the items regardless of their language preference. This strengthened the validity of the responses and allowed the instrument to be more accessible to a wider group of students. By structuring the questionnaire in this manner, the researchers were able to systematically gather data that reflected not only the cognitive awareness of allied health students but also their affective willingness to engage in Filipino Sign Language learning, thereby producing meaningful insights for program enhancement and inclusive education.

Construction and Validation of the Instruments

A researcher-made survey questionnaire was developed to assess the level of awareness and willingness to learn Basic Filipino Sign Language among allied health students across all levels in the Bachelor of Science in Nursing, Bachelor of Science in Midwifery, and Bachelor of Science in Respiratory Therapy programs at Mary Chiles College. This instrument will be used to assist in the context of evaluating respondents' awareness, perceptions, and readiness to engage in learning sign language as a means of improving communication in healthcare settings. To ensure its validity and reliability, the survey will undergo a rigorous validation process to ensure its accuracy, reliability, and relevance to the study. Expert validation was conducted by professionals with expertise in relevant fields, including one (1) sign language interpreter, one (1) special education teacher, and one (1) registered nurse. Each expert evaluated the survey's content, structure, and clarity.

A validator within the instrument was a sign language interpreter. Besides encouraging language accuracy and cultural relevance, an interpreter functions to convey all sign language interpretations faithfully and upholds such ethical standards-critical-and-neutrality and confidentiality-in health communication (Sanchez, 2025). While a special education teacher in the group of expert validators for instruments that are accessible and field sensitive to different communication skills are present among diverse learners. These areas include enhancing the linguistic clarity and appropriateness of the questionnaire across a variety of educational backgrounds-leading to the overall validity and reliability of the instrument (Villaver, 2024). A registered nurse was engaged as an expert validator to ensure the survey instrument genuinely reflects clinical realities, not just theoretical constructs. Involving a nursing professional adds practical insight and helps confirm the clarity and relevance of the items within actual healthcare settings (Abuadas, 2021). Their insights will inform necessary revisions, enhancing the instrument's effectiveness in accurately measuring the intended variables.

The questionnaire was validated through an online meeting via Google Meet. Each questionnaire item was closely reviewed by a panel consisting of a sign language interpreter, a special education teacher, and a registered nurse. These experts provided detailed feedback on clarity, relevance, and cultural sensitivity, offering constructive suggestions on wording and structure. Their insights were carefully considered and incorporated into revisions, ultimately enhancing the content validity and overall quality of the instrument.

The researcher-made survey utilized in this study is based on insights drawn from previous studies and existing literature of "The Impact of Attitudes related to Knowledge, Skills, and Emotion on the Understanding of Sign Language among Medical Students" by Abushaira et al. (2023), "Assessing Medical Students' Knowledge of the Deaf Culture and Community in Puerto Rico: A Descriptive Study" by Kung et al. (2021), "The Importance

of learning sign language.” by Siggann (2023), “A scoping review of Deaf awareness programs in Health professional education” by Terry & Meara (2024), “Filipino Sign Language Skills and Deaf Culture Awareness in Hospitality Industry Employability” by Niebla (2021), “The Filipino Sign Language Act in the Philippines: Policy Analysis” by Rogers, “A Proposed Curriculum Framework for Filipino Sign Language Interpretation Program in Tertiary Program” by Madronio & Tuga (2024), “Use of Filipino sign language pushed” by Ong (2024), and “Connecting through the sigh: Filipino Sign Language workshop promoting inclusivity and safe spaces community” by Montezor (2024).

Recognizing the limitations of 30 allied health students, a pilot study of those students was conducted prior to actual sampling to further validate the reliability and suitability of the instrument. The pilot test investigated clarity, comprehensibility, and convenience of delivery. This participant feedback affirmed usability of the instrument which resulted in a few changes before final administration in the main trial.

Data Gathering Procedures

The study followed a series of structured procedures to adequately gather data and assess the level of awareness and willingness to learn Basic Filipino Sign Language among allied health students.

The data collection process adopted a systematic and organized approach to ensure the reliability and validity of findings. Initially, the researchers conducted a comprehensive review of existing literature and relevant studies on sign language awareness and willingness among healthcare students. The sources served as the foundation for developing the research instrument.

Based on the literature findings, the researchers constructed a questionnaire, which underwent validation by three experts in allied health education and sign language studies to ensure its clarity, relevance, and accuracy.

Before conducting a pilot study, the researchers submitted a formal request to the institution and school administration to secure approval and ensure adherence to the ethical research guidelines. Informed consent was prepared and submitted to the departments of Nursing, Midwifery, and Respiratory Therapy, clearly stating the objectives, scope, significance and ethical considerations of the study. Once the research instruments were validated, a pilot test was administered to a small group of 30 students to evaluate the reliability and consistency of the questionnaire. Based on the feedback, the researchers revised and refined the instrument as necessary.

To ensure a diverse and representative sample, the study employed stratified random sampling. Participants were selected from the three allied health programs at Mary Chiles College: Bachelor of Science in Nursing (BSN), Bachelor of Science in Midwifery (BSM), and Bachelor of Science in Respiratory Therapy (BSRT).

After obtaining approval and confirming the instrument’s reliability and validity through pilot testing, the researchers proceeded with the main data collection. Informed consent was distributed to all respondents, emphasizing the purpose of the study, the voluntary nature of their participation, and the confidentiality of their responses. The survey was administered in a paper-based format to promote a higher response rate, with a specific timeframe allotted for completion to ensure thoughtful responses.

Once all responses were collected, the data was systematically encoded and analyzed using appropriate statistical methods. These analyses aimed to assess the levels of awareness and willingness to learn Basic Filipino Sign Language among allied health students. The results were examined to identify patterns, gaps, and areas for potential improvement.

Ultimately, the findings of this study served as the basis for developing strategic recommendations to integrate Filipino Sign Language awareness and training into the allied health curriculum. This initiative aimed to strengthen communication between healthcare professionals and members of the Deaf and hard of hearing community.

Summary of Reliability Test Result

Table 3: Cronbach Alpha

Sub Scale	Cronbach's Alpha	Internal Consistency
Level of Awareness	0.896	Good
Level of Willingness	0.950	Excellent

The table presented the results of the reliability test conducted during the pilot study to evaluate the dependability of the survey questionnaire in measuring the variables relevant to the study. Cronbach's Alpha was the statistical method employed to assess the internal consistency, which reflected how strongly related the items were within each scale. A Cronbach's Alpha value above 0.7 was generally regarded as an indicator of high internal reliability. As shown in the table, both subscales yielded Cronbach's Alpha values exceeding 0.7 with a verbal interpretation of acceptable reliability. Thus, the validated survey questionnaire was considered a reliable measure for data collection in this study.

Ethical Considerations

This study upheld ethical research principles to ensure the rights and well-being of all respondents. Prior to data gathering, informed consent was secured, highlighting that participation is entirely voluntary, confidential, and that individuals may withdraw at any point without consequences. The study ensured no personal and sensitive information was disclosed, and all data was kept strictly confidential and used solely for academic purposes. Ethical approval was sought from the appropriate institutional review board to ensure adherence to ethical research protocols. Furthermore, respondents were treated with respect, following the principles of beneficence, non-maleficence, and justice, ensuring that the research contributes positively to the academic and healthcare fields without causing any harm.

Statistical Treatment Of Data

The data gathered from the survey questionnaire were tallied, organized, and subjected to appropriate statistical analysis. Frequency and percentage distribution were employed to summarize the demographic profile of the respondents. Median was used to determine the level of awareness and willingness of allied health students to learn Basic Filipino Sign Language, with the corresponding verbal interpretations provided based on the Likert scale. Spearman's Rho Correlation was used to examine the relationship between the respondents' demographic profile and their level of awareness and willingness. Furthermore, Kruskal-Wallis Test was applied to determine if there were significant differences in the respondents' awareness and willingness across groups when grouped according to demographic variables such as age, sex, program, and year level. These non-parametric tests were selected due to the type of data gathered and the assumptions required for analysis. The results of the statistical treatments were presented in tabular form for clarity of interpretation.

Frequency/Percentage Distribution

This statistical method offered numerical summaries and was used to examine demographic variables such as age, sex, and year level. It involved calculating the proportion of each category by dividing its frequency by the total number of respondents, then multiplying by 100 to convert the value into a percentage.

According to Turney (2021), a frequency distribution is the arrangement or pattern of frequencies for a particular variable. In this study, Percentage Distribution served as a crucial statistical method for analyzing and illustrating the socio-demographic profiles of allied health students. It enabled a comprehensive assessment of variables such as age, sex, year level, program, and background in Filipino Sign Language. This technique promoted a clearer understanding of the respondents' profiles, helping to identify trends and patterns relevant to the objectives of the study.

Formula:

$$P = \frac{f}{n} \times 100$$

Where:

P is the percentage

f is the frequency

n is the total number of respondents

100 is the constant number

Median

The median was a statistical measure used to determine the center of a data set by locating the middle value once all data points are arranged sequentially. It was particularly effective for examining data with skewed distribution, as it offered a more consistent measure of central tendency than the mean. By focusing on the midpoint, the median captured the most representative response or outcome, making it especially useful for interpreting ordinal or unevenly distributed data. According to Bhandari (2020), the median is a central tendency measure that determines the middle values of a dataset, effectively splitting it into two equal halves based on the arrangement or ranking of the values. In this study, the Median was used to assess the level of awareness and willingness to learn Basic Filipino Sign Language, serving as an indicator of the central tendency of the responses. It effectively summarized the typical level of awareness and willingness among the respondents, offering a clear and balanced representation of the overall data, especially in the presence of varied or skewed responses.

Formula:

$$Median = \left(\frac{n + 1}{2}\right)th$$

Where:

n is the number of observations in a data set

th is n(th) number

Spearman's Rho Correlation

Spearman Rho (ρ), a non-parametric measure of rank correlation, was employed to evaluate the strength and direction of association between two variables, particularly when their relationship could be best characterized by a monotonic function rather than a strictly linear one. It served as a reliable statistical tool especially in the studies where the assumptions of parametric tests are not met. According to Lund & Lund (2025), Spearman's rho is a nonparametric measure that assesses both the direction and strength of the relationship between two variables, provided they are measured on at least an ordinal scale. In the context of this study, Spearman Rho was utilized to explore and quantify the extent to which the demographic profiles of allied health students including variables such as age, sex, year level, program, and their background in Filipino Sign Language were associated with their levels of awareness and willingness to engage in learning Basic Filipino Sign Language.

Formula:

$$\rho = 1 - \frac{6 \sum d_i^2}{n(n^2 - 1)}$$

Where:

ρ is the Spearman's rank correlation coefficient

d_i is the difference between the ranks of each pair observations

n is the number of observations

Kruskal-Wallis Test

The Kruskal–Wallis test is a non-parametric method used to determine whether there are statistically significant differences between the medians of three or more independent groups. According to Sherwany et al. (2021), it serves as a non-parametric alternative to one-way ANOVA, comparing multiple groups by ranking the data and examining variations in those ranks to assess group differences. This test is especially valuable when the assumption of normality is not met, making it a dependable tool for analyzing data that are skewed or not normally distributed. This enabled researchers to draw meaningful conclusions about group differences without relying on parametric assumptions, thereby enhancing the validity of findings in diverse research settings. In this study, Spearman Rho was utilized to determine the significant relationships between the demographic profile of allied health students including age, sex, year level, program and their background in Filipino Sign Language and their level of awareness and willingness to learn Basic Filipino Sign Language.

Formula:

$$H = \frac{12}{N(N + 1)} \sum \left(\frac{R_i^2}{n_i} \right) - 3(N + 1)$$

Where:

H is the Kruskal-Wallis Test statistic

N is the total number of observations across all groups

R_i is the sum of ranks for the i -ith group

n_i is the number of observations in the i -ith group

k is the number of groups

Presentation, Analysis, And Interpretation Of Data

This chapter provides an analysis and interpretation of the data in relation to the research questions outlined in Chapter I. The discussion is guided by the summarized findings, which are presented in tables for clarity and better understanding.

Problem 1: The demographic profile of the allied health students in terms of:

Table 4: Percentage and Frequency Distribution According to Age

Age	Frequency	Percentage
12 – 17 years old	2	0.8%
18 – 24 years old	225	87.5%

25 – 34 years old	25	9.7%
35 – 44 years old	4	1.6%
45 – 54 years old	1	0.4%

Table 4 presents the frequency and percentage distribution of allied health student respondents based on age. The findings reveal that a significant majority of students learning basic Filipino Sign Language fall within the 18–24 age range, presenting 87.5% (n = 225) of the total respondents. The next largest group is the 25–34 age category, comprising 9.7% (n = 25), which may include individuals aiming to broaden their communication competencies, particularly in relation to the Deaf community. Minimal representation is seen in the 35–44 (1.6%), 12–17 (0.8%), and 45–54 (0.4%) age brackets. This indicates that young adults, especially those aged 18–24, are the most actively engaged in learning basic Filipino Sign Language.

Table 5: Percentage and Frequency Distribution According to Sex

Sex	Frequency	Percentage
Female	181	70.4%
Male	76	29.6%

Table 5 illustrates the frequency and percentage distribution of allied health student respondents based on sex. The results show that most respondents are female, representing 70.4% (n = 181) of the total participants, while male respondents make up 29.6% (n = 76). This highlights a predominantly female student population within allied health programs, a pattern commonly observed in healthcare fields such as nursing and midwifery, where women are more frequently enrolled. The higher proportion of female students may also affect the overall awareness and willingness to learn basic Filipino Sign Language.

Table 6: Percentage and Frequency Distribution According to Year Level

Year Level	Frequency	Distribution
Level 1	76	29.6%
Level 2	78	30.4%
Level 3	69	26.8%
Level 4	34	13.2%

Table 6 presents the distribution of allied health student respondents by year level in terms of frequency and percentage. The largest portion of respondents are from Level 2, comprising 30.4% (n = 78), followed closely by Level 1 students at 29.6% (n = 76). Meanwhile, Level 3 students account for 26.8% (n = 69), and Level 4 students represent the smallest group with 13.2% (n = 34). These figures indicate that a significant number of respondents are in the earlier years of their academic programs. As a result, their exposure to clinical settings and inclusive communication strategies, such as basic Filipino Language, may still be limited and developing.

Table 7: Percentage and Frequency Distribution According to Program

Program	Frequency	Percentage
BS Nursing	203	79.0%

BS Midwifery	37	14.4%
BS Respiratory Therapy	17	6.6%

Table 7 shows the frequency and percentage distribution of allied health student respondents according to their academic program. The majority of respondents are enrolled in the Bachelor of Science in Nursing program, comprising 79.0% (n = 203) of the total sample. This is followed by students from the Bachelor of Science in Midwifery at 14.4% (n = 37), and the Bachelor of Science in Respiratory Therapy at 6.6% (n = 17). The data indicates a strong representation from the nursing program, which may significantly influence the outcomes of the study, particularly in relation to awareness and willingness to learn basic Filipino Sign Language.

Table 8: Percentage and Frequency Distribution According to Background

Background in FSL	Frequency	Percentage
Yes	96	37.4%
No	161	62.6%

Table 8 presents the distribution of allied health students according to their background or prior exposure to basic Filipino Sign Language. Among the 257 respondents, a majority of 161 students (62.6%) reported having no background in FSL. This finding highlights a significant gap in sign language awareness and experience, which could limit their ability to effectively communicate with Deaf or hard of hearing patients in future healthcare settings. However, 96 students (37.4%) indicated some level of exposure to basic Filipino Sign Language. Their familiarity may stem from sources such as self-directed learning, interactions with the Deaf community, family connections, formal instruction, or other informal experiences. While this group represents a considerable portion of the sample, the data still signals a pressing need to broaden and enhance FSL education in allied health programs to promote inclusivity and accessibility in healthcare services. Overall, the findings reveal that although some students have taken proactive steps to learn basic FSL, a large majority remain unaware highlighting the importance of integrating structured basic FSL training into allied health curricula.

Table 9: Percentage and Frequency Distribution According to Background (Form of exposure or learning)

Form of Exposure in FSL	Frequency	Percentage
Previous coursework or training in sign language	9	3.5%
Interaction with Deaf community	23	8.9%
A family member or relative who is Deaf or hard of hearing	17	6.6%
Self-study or online learning	43	16.7%
Other (please specify)	4	1.6%
Not Applicable	161	62.6%

Table 9 presents the different forms of exposure or learning experiences allied health students have had regarding basic Filipino Sign Language (FSL). A significant portion of the respondents, 161 students or 62.6%, reported having no prior exposure to Filipino Sign Language. This suggests that most students possess little to no foundational knowledge or experience with the language. Among those who had some exposure, the most frequently reported method was through self-study or online learning, cited by 43 students or 16.7%. This reflects the increasing influence of digital tools and independent learning efforts, likely due to their ease of access and flexibility. The second most common form of exposure was interaction with members of the Deaf community, with 23 students (8.9%) indicating they learned or became familiar with FSL through these direct

encounters. Such experiences are particularly valuable, as they tend to foster deeper understanding and more practical application of sign language. A smaller portion of students, 17 (6.6%), reported having a family member or relative who is Deaf or hard of hearing, which may influence their motivation to and openness to learning FSL. In terms of formal education, only 9 students (3.5%) indicated they had been exposed to FSL through previous coursework or training, including elective classes, workshops, or short-term courses, either offered within their academic institutions or pursued independently. This low percentage suggests a gap in structured sign language instruction within allied health programs. Lastly, 4 students (1.6%) selected “Other,” specifying varied forms of exposure, such as watching television shows or films featuring sign language, engaging with educational content on social media, or learning from colleagues who use or teach FSL. These responses highlight that informal and incidental learning avenues also contribute to basic Filipino Sign Language awareness, though to a limited extent. Overall, although some students have encountered basic Filipino Sign Language through various forms of exposure, the findings reveal a substantial gap in both formal instruction and practical experience. This emphasizes the importance of incorporating or enhancing FSL education within allied health programs to better prepare future professionals for effective interaction with the Deaf and hard of hearing community.

Problem 2: The level of awareness of allied health students in Basic Filipino Sign Language in terms of:

Table 10: Level of Awareness Regarding of the Existence and Purpose of Filipino Sign Language

The existence and purpose of Filipino Sign Language	Median	Standard Deviation	IQR	Verbal Interpretation
1. I am aware that FSL is the officially recognized sign language of the Deaf community in the Philippines.	3.00	1.00	2.00	Moderately Aware
2. I am aware that FSL is different from other sign languages such as American Sign Language (ASL) and others.	3.00	1.05	2.00	Moderately Aware
3. I am aware that FSL is legally recognized under Republic Act No. 1106 (Filipino Sign Language Act).	2.00	1.03	1.00	Slightly Aware
4. I am aware that FSL is the recognized mode of communication, but American Sign Language (ASL) continues to be commonly used within the community.	3.00	1.00	1.00	Moderately Aware
5. I am aware that FSL has its own grammar, sentence structure, and language rules.	3.00	1.03	2.00	Moderately Aware
6. I am aware that FSL is used by Deaf Filipinos in daily communication, including in schools, hospitals, and government agencies.	3.00	1.00	2.00	Moderately Aware
7. I am aware that FSL is being taught in schools and communities to support the inclusion of Deaf individuals.	3.00	1.03	2.00	Moderately Aware
8. I am aware that the government has made efforts to promote the use of FSL through laws and initiatives, including Republic Act 11106 and efforts by the Komisyon sa Wikang Filipino.	3.00	1.02	1.00	Moderately Aware
9. I am aware that FSL is recognized as an essential language for communication in various sectors, including education, broadcasting, and government agencies.	3.00	0.96	2.00	Moderately Aware

10. I am aware that there are existing training programs and initiatives, such as workshops and community-based classes, offered by organizations like the Kakamay Movement and DeafEd Philippines to help individuals learn Filipino Sign Language.	3.00	0.99	1.00	Moderately Aware
Average of median	3.00	0.94		Moderately Aware

Note: Level of Awareness Regarding of the Existence and Purpose of Filipino Sign Language 1.00 (Not Aware), 2.00 (Slightly Aware), 3.00 (Moderately Aware), 4.00 (Fully Aware)

Table 10 presents the level of awareness of allied health students regarding the existence and purpose of Filipino Sign Language. The overall median of 3.00 and a standard deviation of 0.94 reflects a moderate level of awareness among the respondents. Most statements, including the recognition of FSL as the official language of the Deaf community, its differences from other sign languages like ASL, its daily use in various sectors, and government efforts to support it, were rated with a median of 3.00, indicating moderate awareness. This suggests that students generally understand the significance and role of FSL in society. However, the statement “I am aware that FSL is legally recognized under Republic Act No. 1106 (Filipino Sign Language Act)” received a lower median of 2.00, interpreted as slightly aware, indicating that limited knowledge among students about the legal framework supporting FSL. Overall, the results indicate that while students have a basic understanding of FSL’s purpose and presence, their awareness of its legal foundation remains limited. This points to the importance of enhancing educational efforts that include both the linguistic and legal dimensions of FSL, especially within the context of inclusive healthcare communication.

This finding is consistent with the study conducted by Daculan et al. (2022), which emphasized that despite the enactment of Republic Act No. 11106, a significant lack of awareness and understanding of Filipino Sign Language (FSL) and the Deaf community still exists in the Philippines. Their study demonstrated how this limited awareness contributes to ongoing communication barriers and social stigma, an issue illustrated by the case of Minnio Buhat, a Deaf individual who experienced online discrimination due to misconceptions about Deaf grammar and writing styles. These real-life experiences underscore the pressing need for inclusive education and increased public awareness to challenge false beliefs about Deaf culture and language.

Table 11: Level of Awareness Regarding of Its Role in Communication with Individuals who are Deaf or Hard of hearing

Its role in communication with individuals who are deaf or hard of hearing	Median	Standard Deviation	IQR	Verbal Interpretation
1. I am aware that FSL is an important mode of communication for Deaf Filipinos.	3.00	0.86	1.00	Moderately Aware
2. I am aware that FSL helps bridge communication gaps between Deaf individuals and hearing individuals.	3.00	0.85	1.00	Moderately Aware
3. I am aware that FSL allows hearing individuals to communicate effectively with Deaf individuals in various settings, such as schools, hospitals, workplaces, and public spaces.	3.00	0.85	1.00	Moderately Aware
4. I am aware of the different communication methods used by Deaf and hard of hearing individuals, such as lip reading, written communication, assistive technology, cued speech, and the use of sign language interpreters.	3.00	0.94	1.00	Moderately Aware

5. I am aware that nonverbal cues, such as gestures and facial expressions, are important in sign language communication.	4.00	0.80	1.00	Moderately Aware
6. I am aware that hearing individuals can take online courses to learn basic Filipino Sign Language.	3.00	0.98	2.00	Moderately Aware
7. I am aware how to properly approach and communicate with a Deaf or hard of hearing individual.	3.00	0.97	2.00	Moderately Aware
8. I am aware that Deaf and hard of hearing individuals may face challenges in accessing healthcare services because of the limited availability of sign language interpreters.	3.00	0.88	1.00	Moderately Aware
9. I am aware that the Filipino Deaf community has its own culture, which is systematically supported by the presence of sign language interpreters in school settings.	3.00	0.96	2.00	Moderately Aware
10. I am aware of the basic signs used in Filipino Sign Language.	3.00	1.03	1.00	Moderately Aware
Average of median	3.00	0.82		Moderately Aware

Note: Level of Awareness Regarding of Its Role in Communication with Individuals who are Deaf or Hard of hearing 1.00 (Not Aware), 2.00 (Slightly Aware), 3.00 (Moderately Aware), 4.00 (Fully Aware)

As presented in Table 11, the data shows that allied health students demonstrate a moderate level of awareness regarding the role of Filipino Sign Language in communicating with individuals who are Deaf or Hard of Hearing. The overall median score is 3.00, with a standard deviation of 0.82, indicating a consistent, though not highly advanced, understanding of FSL among respondents. The majority of the statements were rated as “Moderately Aware,” showing that students recognize the importance of FSL in facilitating communication between Deaf and hearing individuals, particularly in essential environments such as hospitals, schools, and public areas. They also show some awareness of various communication strategies used by Deaf or Hard of Hearing individuals, including lip reading, written communication, and assistive technologies. The highest level of awareness was observed in the item related to nonverbal communication, specifically gestures and facial expressions, which received a median of 4.00 and a standard deviation of 0.8. This indicates that students are fully aware of the visual nature of sign language and the significance of nonverbal cues in effective communication. Other areas, such as familiarity with basic FSL signs, knowledge of appropriate ways to interact with Deaf individuals, and understanding of Deaf culture, were only rated at a moderate level. This suggests limited hands-on exposure or formal instruction. Overall, the findings indicate a positive yet developing understanding of FSL’s role in inclusive communication. These results highlight the potential benefit of incorporating more structured learning opportunities and practical experiences into the curriculum to better equip future healthcare professionals in supporting the needs of the Deaf and Hard of Hearing community.

Similarly, the study conducted by Bialza et al. (2023) supports these findings, as it revealed that nursing students generally have a positive attitude towards the inclusion of Sign Language and Braille into the academic curriculum. Their study, which involved 259 Bachelor of Science in Nursing students and utilized a descriptive correlational method with stratified sampling, highlighted students’ awareness and communication barriers encountered by Deaf and blind individuals. The participants acknowledged the importance of acquiring the necessary communication skills to address these challenges. Using Spearman’s Rank Order Correlation, the study identified a significant positive relationship between students’ perceptions and their preference for learning such skills, indicating that greater awareness leads to stronger willingness to learn these skills. Bialza et al. concluded that nursing students view Sign Language and Braille as valuable tools in enhancing patient

interaction and are generally open to taking these subjects as electives to strengthen their therapeutic communication abilities.

Table 12: Level of Awareness Regarding of the Importance of Filipino Sign Language in healthcare settings

The importance of Filipino Sign Language in healthcare settings	Median	Standard Deviation	IQR	Verbal Interpretation
1. I am aware that FSL can improve communication between healthcare providers—such as nurses, midwives, and respiratory therapists and Deaf patients.	3.00	0.82	1.00	Moderately Aware
2. I am aware that FSL is an important part of cultural competency in healthcare.	3.00	0.83	1.00	Moderately Aware
3. I am aware that FSL allows hearing individuals to communicate effectively with Deaf individuals in various settings, such as schools, hospitals, workplaces, and public spaces.	3.00	0.94	2.00	Moderately Aware
4. I am aware that Deaf individuals should have the right to access healthcare in Filipino Sign Language, similarly, to how hearing patients access healthcare.	3.00	0.82	1.00	Moderately Aware
5. I am aware that institutions such as the University of the Philippines (Manila) and Ateneo de Manila University have integrated Filipino Sign Language into their healthcare training programs.	3.00	1.05	1.00	Moderately Aware
6. I am aware that Filipino Sign Language (FSL) is an essential tool in creating an inclusive healthcare environment for Deaf or hard of hearing patients.	3.00	0.84	1.00	Moderately Aware
7. I am aware that Filipino Sign Language can improve the quality of care and reduce the stress of Deaf patients in healthcare settings.	3.00	0.81	1.00	Moderately Aware
8. I am aware that Filipino Sign Language is necessary for addressing the communication challenges faced by Deaf patients in rural areas with limited interpreted access.	3.00	0.81	1.00	Moderately Aware
9. I am aware of the resources available for learning FSL in healthcare, such as training, workshops, and book-based materials.	3.00	0.94	2.00	Moderately Aware
10. I am aware of the basic signs used in Filipino Sign Language.	3.00	0.81	1.00	Moderately Aware
Average of median	3.00	0.76		Moderately Aware

Note: Level of Awareness Regarding of the Importance of Filipino Sign Language in healthcare settings 1.00 (Not Aware), 2.00 (Slightly Aware), 3.00 (Moderately Aware), 4.00 (Fully Aware)

Table 12 presents the level of awareness among allied health students concerning the importance of Filipino Sign Language in healthcare settings. The overall median score of 3.00 and a standard deviation of 0.76 reflect moderate awareness of FSL’s role in facilitating communication between healthcare providers and Deaf or hard of hearing individuals. Responses across all indicators were consistently rated as “Moderately Aware.” Students recognized the significance of FSL in improving communication with Deaf patients, enhancing cultural competence within healthcare, and promoting inclusivity. Respondents also acknowledged the importance of providing healthcare professionals—such as nurses, midwives, and respiratory therapists, with specialized FSL training. Moreover, students were aware that institutions such as the University of the Philippines (Manila) and Ateneo de Manila University have already integrated FSL into their healthcare curricula, indicating a growing institutional emphasis on inclusive communication. However, their familiarity with available learning materials and training opportunities remained at a moderate level. In summary, the findings point to a generally positive yet still emerging understanding of FSL’s relevance in healthcare. These outcomes highlight the need for expanded efforts, such as educational workshops, curriculum development, and hands-on training to further increase awareness and better prepare future healthcare workers to communicate effectively with Deaf and hard of hearing populations, especially in underserved or remorseful areas.

The findings of this study indicate that allied health students generally exhibit a moderate level of awareness regarding the significance of Filipino Sign Language in healthcare settings. They acknowledge its essential role in facilitating effective communication with Deaf individuals and in fostering inclusive clinical environments. However, this awareness does not necessarily equate to practical competence or familiarity with FSL training opportunities. These results align with the study by Niebla (2021), which examined awareness of Deaf culture and FSL among hospitality stakeholders in Zamboanga City. While respondents in Niebla’s study demonstrated a strong understanding of the cultural and communicative value of FSL, they lacked the practical skills necessary to engage effectively with Deaf clients. This discrepancy between awareness and application was identified as a factor negatively impacting both service delivery and employment inclusivity for Deaf individuals in the hospitality sector. The healthcare sector, much like the hospitality industry, would benefit from structured strategies, such as curriculum integration, workshops, and targeted training, to bridge the gap between theoretical awareness and practical FSL proficiency. The similarities observed across these fields highlight a wider societal initiative through education and continuous professional development can ensure that awareness translates into actionable competence, ultimately leading to more equitable and accessible services for the Deaf community.

Table 13: Level of Willingness Regarding of Interest in Basic Filipino Sign Language

Interest in Basic Filipino Sign Language	Median	Standard Deviation	IQR	Verbal Interpretation
1. I am interested in learning basic Filipino Sign Language (FSL) to improve communication with Deaf individuals.	4.00	0.66	1.00	Very Willing
2. I am willing to seek resources, such as training and seminars, to improve my skills in Basic Filipino Sign Language.	4.00	0.70	1.00	Very Willing
3. I am willing to gain knowledge of FSL as part of my professional development in healthcare.	4.00	0.63	1.00	Very Willing
4. I am willing to support initiatives that advocate for the inclusion of Basic Filipino Sign Language in schools.	4.00	0.64	1.00	Very Willing
5. I am willing to attend workshops or classes to learn basic FSL.	4.00	0.66	1.00	Very Willing
6. I am willing to share my knowledge of Basic Filipino Sign Language (FSL) with others once I	4.00	0.64	1.00	Very Willing

become proficient.				
7. I am willing to engage with the Deaf community to better understand their culture and language.	4.00	0.64	1.00	Very Willing
8. I am willing to practice Basic Filipino Sign Language with friends, family, or colleagues.	4.00	0.64	1.00	Very Willing
9. I am willing to participate in community events, such as those organized by the Philippine Bible Society, as well as other events that promote Filipino Sign Language.	4.00	0.68	1.00	Very Willing
10. I am willing to invest time and effort into learning FSL to improve my professional skills.	4.00	0.66	1.00	Very Willing
Average of median	4.00	0.59		Very Willing

Note: Level of Willingness Regarding of Interest in Basic Filipino Sign Language 1.00 (Not Willing), 2.00 (Slightly Willing), 3.00 (Somewhat Willing), 4.00 (Very Willing)

Table 13 illustrates the willingness of allied health students to learn basic Filipino Sign Language, particularly in terms of their interest in acquiring the language. The findings show a median score of 4.00 with a standard deviation of 0.59, corresponding to a verbal interpretation of “Very Willing.” This reflects a strong and consistent desire among the students to learn and engage with basic FSL. Each item in this category also received a median score of 4.00, indicating that students are highly driven to enhance their communication with Deaf individuals. The respondents expressed eagerness to attend training sessions, participate in workshops and community initiatives, and incorporate FSL into their professional growth as future healthcare professionals. Additionally, they demonstrated a willingness to advocate for FSL by sharing what they learn and supporting its inclusion in educational settings. Students also showed a notable interest in engaging directly with the Deaf community to gain a deeper understanding of its language and culture, emphasizing their commitment to inclusive and accessible communication. Their willingness to dedicate time and effort to learning FSL reflects an appreciation of its value in both personal development and their future roles in healthcare.

Kung et al. (2021) highlighted the vital influence of attitude and willingness in learning sign language, especially among those in healthcare and education. Their study found that individuals who hold positive views toward the Deaf community and sign language tend to show greater motivation and dedication to learning. This willingness is shaped by emotional engagement, personal values, and a professional sense of responsibility to ensure inclusive and effective communication. These insights align with the findings in Table 3.1, which indicate that allied health students exhibit a high level of willingness to learn basic Filipino Sign Language. The students showed strong interest in attending training programs, workshops, and community outreach activities. They also expressed a desire to apply FSL in both academic and clinical settings, support its inclusion in the curriculum, and interact with the Deaf community to enhance their cultural awareness. Such behaviors are consistent with what Kung et al. (2021) describe as intrinsically motivated learning, grounded in empathy and commitment to inclusive healthcare. The relationship between a positive attitude and the willingness to learn FSL emphasizes the need to foster early awareness and engagement among students. Educational institutions can strengthen this willingness by providing meaningful learning opportunities, ultimately leading to practical skills that support inclusive communication and benefit both healthcare providers and the Deaf community.

Table 14: Level of Willingness Regarding Communicating with Deaf individuals using Filipino Sign Language

Communicating with Deaf individuals using Filipino Sign Language	Median	Standard Deviation	IQR	Verbal Interpretation
1. I am willing to use FSL to communicate with Deaf patients in healthcare settings.	4.00	0.61	1.00	Very Willing

2. I am willing to attend events or gatherings, such as the training workshop by DOST-STII, where I can practice communicating with Deaf individuals using Filipino Sign Language.	4.00	0.63	1.00	Very Willing
3. I am willing to ask experienced Filipino Sign Language users, such as Deaf individuals or trained FSL instructors, for help in improving my skills.	4.00	0.63	1.00	Very Willing
4. I am willing to advocate for the rights of Deaf individuals by learning and using FSL.	4.00	0.58	1.00	Very Willing
5. I am willing to make an effort to learn FSL to foster better communication with Deaf individuals.	4.00	0.61	1.00	Very Willing
6. I am willing to engage in conversations with Deaf individuals even if I am not fully fluent in Filipino Sign Language.	4.00	0.62	1.00	Very Willing
7. I am willing to use FSL to improve the quality of care I provide to Deaf patients.	4.00	0.61	1.00	Very Willing
8. I am willing to use FSL to improve the quality of care I provide to Deaf patients.	4.00	0.61	1.00	Very Willing
9. I am willing to use basic Filipino Sign Language (FSL) phrases and gestures to effectively communicate with Deaf individuals in healthcare settings.	4.00	0.61	1.00	Very Willing
10. I am willing to invest time and effort into learning FSL to improve my professional skills.	4.00	0.59	1.00	Very Willing
Average of median	4.00	0.57		Very Willing

Note: Level of Willingness Regarding Communicating with Deaf individuals using Filipino Sign Language 1.00 (Not Willing), 2.00 (Slightly Willing), 3.00 (Somewhat Willing), 4.00 (Very Willing)

Table 14 highlights the willingness of allied health students to communicate with Deaf individuals using Filipino Sign Language. The data reveals a median score of 4.00 with a standard deviation of 0.57, corresponding to a verbal interpretation of “Very Willing.” This suggests a strong and consistent intent among the students to utilize FSL in real-world interactions, particularly in healthcare environments. Each item in the table received a median of 4.00, indicating a high level of openness among students toward using FSL when interacting with Deaf patients. They also showed enthusiasm for participating in events such as workshops conducted by organizations such as DOST-STII, which provide opportunities to enhance their FSL skills. Additionally, students expressed a willingness to seek support from experienced individuals, such as Deaf community members and certified FSL instructors. Furthermore, the respondents acknowledged the importance of FSL not only as a communication tool but also as a means of advocating for the rights and dignity of Deaf individuals. They demonstrated a commitment to fostering respectful and inclusive care using FSL. Even those without advanced fluency conveyed confidence in using basic signs and gestures to ensure effective communication in clinical settings.

This aligns with the study of Siggann (2023), who highlighted that learning sign language fosters inclusivity, strengthens communication, and deepens cultural awareness. Siggann clarified that sign language is more than just a visual equivalent of spoken language, it is a complex linguistic system closely connected to the culture

and identity of the Deaf community. Acquiring sign language skills helps close communication gaps and promotes accessibility, which mirrors the students’ understanding of FSL as a tool for advocacy and inclusive healthcare. Additionally, Siggenn emphasized that incorporating sign language education into professional settings encourages empathy and equity, further supporting the importance of FSL in healthcare practice.

Table 15: Level of Willingness Regarding the Comfort Level in Learning and Using Basic Filipino Sign Language

Comfort level in learning and using Basic Filipino Sign Language	Median	Standard Deviation	IQR	Verbal Interpretation
1. I am willing to learn basic FSL to improve my communication with Deaf or hard or hearing individuals.	4.00	0.59	1.00	Very Willing
2. I am willing to practice Basic FSL to increase my confidence in using it.	4.00	0.59	1.00	Very Willing
3. I am willing to learn FSL, even if I may not be proficient at first.	4.00	0.58	1.00	Very Willing
4. I am willing to use Filipino Sign Language to effectively communicate with Deaf patients in a healthcare setting, and I feel comfortable with the idea.	4.00	0.54	1.00	Very Willing
5. I am willing to comfortably practice FSL with my peers and healthcare professionals to improve my skills.	4.00	0.59	1.00	Very Willing
6. I am willing to use FSL in real-life interactions with Deaf patients once I have learned the basics and feel comfortable.	4.00	0.58	1.00	Very Willing
7. I am willing to make mistakes while learning and using FSL as part of the process of communicating with Deaf patients.	4.00	0.60	1.00	Very Willing
8. I am willing to use FSL in a healthcare environment, even if my skills are still developing, and I would feel comfortable doing so.	4.00	0.59	1.00	Very Willing
9. I am willing to participate in FSL learning activities and exercises to improve my communication skills, and I feel comfortable doing so.	4.00	0.61	1.00	Very Willing
Average of median	4.00	0.56		Very Willing

Note: Level of Willingness Regarding the Comfort Level in Learning and Using Basic Filipino Sign Language 1.00 (Not Willing), 2.00 (Slightly Willing), 3.00 (Somewhat Willing), 4.00 (Very Willing)

Table 15 presents the willingness of allied health students to learn basic Filipino Sign Language, focusing on the comfort in both learning and applying it. The overall median score is 4.00, with a standard deviation of 0.56, which corresponds to a verbal interpretation of “Very Willing.” Each item in the table also recorded a median of 4.00, consistently indicating a high level of enthusiasm. Students expressed strong interest in learning basic

FSL to enhance communication with Deaf or hard of hearing individuals, and they are comfortable practicing it to build confidence. They also showed openness to learning FSL despite initial challenges, acknowledging that mistakes are part of the learning process. Moreover, respondents shared that they would feel comfortable using FSL in actual healthcare scenarios, even as they continue to develop their proficiency. They also showed a readiness to engage in learning opportunities and collaborate with peers and professionals to enhance their FSL skills.

In contrast, the study by Chong et al. (2021), which surveyed 297 community pharmacists, offered a different perspective on communication with Deaf and hard of hearing (DHOH) patients. Although pharmacists play a vital role in healthcare, their interactions with DHOH individuals were relatively limited and primarily dependent on writing and lip-reading rather than on sign language. Only 3.4% had ever utilized the services of a professional interpreter. Their comfort levels in communicating were significantly influenced by external factors such as prior experience and institutional support. Pharmacists who lacked employer-provided training or support showing a strong relationship with lower comfort levels ($p < 0.001$). Additionally, those who felt less confident were more inclined to express the need for sign language training ($p = 0.004$). Professionals suggest that while professionals already in practice may face institutional barriers that affect their communication competence, students, especially those still in training can develop willingness and confidence through early exposure and academic integration of FSL. This underscores the importance of embedding FSL learning opportunities within academic curricula to foster a sense of readiness and personal initiative among future healthcare professionals. It also demonstrates that educational institutions have a critical role in cultivating inclusive attitudes and communication skills that extend beyond academic settings into real-world clinical practice.

Problem 4: The significant relationship between the profile of allied health students and their level of awareness and willingness to learn basic Filipino Sign Language:

Table 16: Results of Significant relationship between the age of allied health students and their level of awareness and willingness to learn basic Filipino Sign Language

Awareness in Basic Filipino Sign Language			
	Existence of FSL	Role of FSL	Importance of FSL
Spearman rho (ρ)	-0.160	-0.195	-0.158
df	255	255	255
p-value	0.010	0.002	0.011
Decision	Reject Null Hypothesis	Reject Null Hypothesis	Reject Null Hypothesis
Interpretation	<i>Significant</i>	<i>Significant</i>	<i>Significant</i>
Overall Level of Awareness		Spearman rho (ρ)	-0.226
		df	255
		p-value	<0.001
		Decision	Reject Null Hypothesis
		Interpretation	<i>Significant</i>
Willingness to learn basic Filipino Sign Language			
	Interest in learning FSL	Communicating with	Comfort level in using

		Deaf using FSL	FSL
Spearman rho (ρ)	-0.086	-0.130	-0.090
df	255	255	255
p-value	0.168	0.037	0.150
Decision	Reject Null Hypothesis	Reject Null Hypothesis	Reject Null Hypothesis
Interpretation	<i>Not Significant</i>	<i>Significant</i>	<i>Not Significant</i>
Overall Level of Willingness	Spearman rho (ρ)		-0.135
	df		255
	p-value		0.031
	Decision		Reject Null Hypothesis
	Interpretation		<i>Significant</i>

Note: Spearman P correlation 0.01-0.19 (No or negligible relationship), 0.20-0.29 (Weak relationship), 0.30-0.39 (Moderate relationship), 0.40-0.69 (Strong relationship), >0.70 (Very strong relationship). The level of significance is 0.05.

Table 16 reveals a statistically significant negative correlation between age and both awareness and willingness to learn basic Filipino Sign Language (FSL) among allied health students. Specifically, the Spearman’s rho values for the components of awareness— “Existence of FSL” ($\rho = -0.160$, $p = 0.010$), “Role of FSL” ($\rho = -0.195$, $p = 0.002$), and “Importance of FSL” ($\rho = -0.158$, $p = 0.011$)—all show statistically significant negative correlations with age. This suggests that younger students tend to be more aware of basic Filipino Sign Language and its importance in effective communication, particularly within healthcare contexts. Additionally, the overall awareness score also showed a significant negative relationship with age ($\rho = -0.226$, $p < 0.001$), emphasizing a consistent trend where awareness decreases slightly as age increases. In terms of willingness to learn basic Filipino Sign Language, there was a weak but significant negative correlation with age ($\rho = -0.135$, $p = 0.031$), suggesting that younger students are generally more inclined to learn. Among the subcomponents, only the willingness to communicate using basic FSL was significantly associated with age ($\rho = -0.130$, $p = 0.037$). In contrast, interest in learning ($\rho = -0.086$, $p = 0.168$) and comfort level ($\rho = -0.090$, $p = 0.150$) did not show statistically significant relationships. Overall, these results suggest that younger students are more aware of and willing to engage with basic FSL, while older students may exhibit slightly lower levels of awareness and willingness. These findings highlight the importance of developing age-inclusive strategies in allied health education to promote FSL learning across all student groups.

In addition, findings revealed that most respondents demonstrated a high level of awareness of Filipino Sign Language (FSL). This indicates that allied health students generally recognize the importance of FSL in fostering inclusive healthcare communication, particularly in addressing the needs of Deaf patients. Such a strong awareness provides a solid foundation for promoting FSL learning initiatives, as it reflects the students’ readiness to engage in inclusive practices. While age differences show a slight decline in awareness and willingness among older students, the overall high awareness level highlights a positive outlook for integrating FSL into healthcare education and professional practice.

Table 17: Results of Significant relationship between the sex of allied health students and their level of awareness and willingness to learn basic Filipino Sign Language

Awareness in Basic Filipino Sign Language			
	Existence of FSL	Role of FSL	Importance of FSL
Spearman rho (ρ)	-0.160	-0.195	-0.158
df	255	255	255
p-value	0.010	0.002	0.011
Decision	Reject Null Hypothesis	Reject Null Hypothesis	Reject Null Hypothesis
Interpretation	<i>Significant</i>	<i>Significant</i>	<i>Significant</i>
Overall Level of Awareness		Spearman rho (ρ)	-0.226
		df	255
		p-value	<0.001
		Decision	Reject Null Hypothesis
		Interpretation	<i>Significant</i>
Willingness to learn basic Filipino Sign Language			
	Interest in learning FSL	Communicating with Deaf using FSL	Comfort level in using FSL
Spearman rho (ρ)	-0.086	-0.130	-0.090
df	255	255	255
p-value	0.168	0.037	0.150
Decision	Reject Null Hypothesis	Reject Null Hypothesis	Reject Null Hypothesis
Interpretation	<i>Not Significant</i>	<i>Significant</i>	<i>Not Significant</i>
Overall Level of Willingness		Spearman rho (ρ)	-0.135
		df	255
		p-value	0.031
		Decision	Reject Null Hypothesis
		Interpretation	<i>Significant</i>

Note: Spearman P correlation 0.01-0.19 (No or negligible relationship), 0.20-0.29 (Weak relationship), 0.30-0.39 (Moderate relationship), 0.40-0.69 (Strong relationship), >0.70 (Very strong relationship). The level of significance is 0.05.

Table 17 displays the results of the Chi-square test conducted to determine the significant relationship between the sex of allied health students and their level of awareness and willingness to learn basic Filipino Sign Language. Findings revealed that sex is significantly linked to certain components of awareness. Notably, the variables “Role of FSL” ($\chi^2 = 10.9, p = 0.012$), “Importance of FSL” ($\chi^2 = 14.7, p = 0.002$), “Overall Level of Awareness” ($\chi^2 = 13.6, p = 0.004$) all produced p-values below the 0.05 threshold, indicating that male and female students differ meaningfully in how they perceive the role and significance of FSL in communication and healthcare. However, the variable “Existence of FSL” ($\chi^2 = 7.63, p = 0.054$) was not statistically significant, suggesting that both sexes share a comparable level of basic awareness regarding the presence of FSL. In contrast, no significant relationship was found between sex and any of the variables related to willingness to learn FSL. The p-values for “Interest in learning FSL” ($\chi^2 = 1.39, p = 0.500$), “Communicating with Deaf using FSL” ($\chi^2 = 6.76, p = 0.080$), “Comfort level in using FSL” ($\chi^2 = 4.12, p = 0.249$), and “Overall Level of Willingness” ($\chi^2 = 5.26, p = 0.154$) all exceeded the 0.05 level, leading to the retention of the null hypothesis. This implies that willingness to engage with FSL is not significantly influenced by sex. Overall, these results suggest that while differences in awareness exist between male and female students—particularly in understanding FSL’s role and importance—their willingness to learn and use FSL remains equally strong. These findings emphasize the importance of designing awareness-raising initiatives that consider gender-related perspectives, while continuing to support and nurture the shared interest in inclusive communication among all students.

Furthermore, results also showed that respondents, regardless of sex, generally possess a high level of awareness of FSL. This finding suggests that both male and female students acknowledge the significance of FSL in communication and healthcare contexts. Although minor variations were observed in how each sex perceives specific aspects such as the role and importance of FSL, their overall awareness remains consistently high. This shared level of awareness demonstrates that students, irrespective of gender, already value the relevance of FSL. Building on this strong foundation, future initiatives can focus on sustaining this high awareness while addressing subtle gender-related differences to further encourage willingness and practical application of FSL in healthcare settings.

In relation to study by Choo et al. (2021) it found that sex did not significantly affect the extent of Filipino Sign Language (FSL) use among Deaf employees. Both male and female participants reported similar levels of FSL utilization in the workplace. This suggests that gender may not be a strong influencing factor in FSL engagement. Instead, other variables like educational attainment, organizational size, and support networks had greater impact. The researchers also noted that a small sample size may have limited the detection of subtle gender-related differences.

Table 18: Results of Significant relationship between the year level of allied health students and their level of awareness and willingness to learn basic Filipino Sign Language

Awareness in Basic Filipino Sign Language			
	Existence of FSL	Role of FSL	Importance of FSL
Spearman rho (ρ)	0.095	-0.195	-0.158
df	255	255	255
p-value	0.130	0.002	0.011
Decision	Retain Null Hypothesis	Reject Null Hypothesis	Retain Null Hypothesis
Interpretation	<i>Not Significant</i>	<i>Significant</i>	<i>Not Significant</i>
		Spearman rho (ρ)	0.073
		df	255

Overall Level of Awareness	p-value		0.243
	Decision		Retain Null Hypothesis
	Interpretation		<i>Not Significant</i>
Willingness to learn basic Filipino Sign Language			
	Interest in learning FSL	Communicating with Deaf using FSL	Comfort level in using FSL
Spearman rho (ρ)	0.028	-0.019	-0.090
df	255	255	255
p-value	0.654	0.764	0.150
Decision	Retain Null Hypothesis	Retain Null Hypothesis	Retain Null Hypothesis
Interpretation	<i>Not Significant</i>	<i>Significant</i>	<i>Not Significant</i>
Overall Level of Willingness	Spearman rho (ρ)		-0.005
	df		255
	p-value		0.933
	Decision		Retain Null Hypothesis
	Interpretation		<i>Not Significant</i>

Note: Spearman P correlation 0.01-0.19 (No or negligible relationship), 0.20-0.29 (Weak relationship), 0.30-0.39 (Moderate relationship), 0.40-0.69 (Strong relationship), >0.70 (Very strong relationship). The level of significance is 0.05.

Table 18 presents the results of the Spearman’s rho correlation analysis assessing the relationship between the year level of allied health students and their awareness and willingness to learn basic Filipino Sign Language. Among these three awareness components— “Existence of FSL” ($\rho = 0.095$, $p = 0.130$), “Role of FSL” ($\rho = 0.137$, $p = 0.028$), and “Importance of FSL” ($\rho = 0.101$, $p = 0.107$)—only the Role of FSL demonstrated a statistically significant correlation. Although the relationship is weak, it is positive, indicating that students in higher academic years are more likely to recognize the relevance of Filipino Sign Language in healthcare. This could be attributed to their increased exposure to clinical settings, health communication practices, and patient interactions, which may enhance their appreciation of the role FSL plays in promoting inclusive care. In contrast, the overall awareness score ($\rho = 0.073$, $p = 0.243$) did not show a significant relationship with year level, suggesting that year level does not have a strong influence on students’ general awareness of Filipino Sign Language. In terms of willingness to learn basic Filipino Sign Language, none of the indicators—“Interest in learning” ($\rho = 0.028$, $p = 0.654$), “Communication with the Deaf” ($\rho = 0.019$, $p = 0.764$), or “Comfort level” ($\rho = 0.021$, $p = 0.743$) showed no significant relationships. The same applies to “Overall Willingness” ($\rho = -0.005$, $p = 0.933$), indicating that a student’s academic year does not affect their motivation or openness to learn basic FSL. These results suggest that while higher years may slightly enhance students’ understanding of the role of FSL, their interest, comfort, or willingness to learn the language remains unaffected by their academic standing. Thus, initiatives to promote basic FSL should be introduced across all year levels, not just senior students.

These findings align with Kung et al. (2021) and Bialza et al. (2023) which emphasized a positive view of the Deaf community enhances student motivation to engage in sign language education, even among those with

limited exposure. Kung et al (2021) findings revealed that although most medical students were aware of the existence of the Deaf culture and community, only 63% had direct experience interacting with Deaf or Hard of Hearing (D&HH) individuals. Notably, students in their clinical years (third and fourth year) had significantly more exposure compared to those in pre-clinical years, likely due to increased patient interactions during clinical rotations. Furthermore, only 21% of the respondents had previously enrolled in a sign language course. Despite this, many still showed strong interest in learning American Sign Language. Underscoring the importance of integrating sign language education into the medical curriculum. Similarly, Bialza et al. noted a significant positive correlation between perception and preferability, suggesting a heightened awareness and willingness to learn.

Table 19: Results of Significant relationship between the program of allied health students and their level of awareness and willingness to learn basic Filipino Sign Language

Awareness in Basic Filipino Sign Language			
	Existence of FSL	Role of FSL	Importance of FSL
x ²	12.0	23.6	21.6
df	6	6	6
p-value	0.063	<0.001	0.001
Decision	Retain Null Hypothesis	Reject Null Hypothesis	Reject Null Hypothesis
Interpretation	<i>Not Significant</i>	<i>Significant</i>	<i>Significant</i>
Overall Level of Awareness		x ²	25.4
		df	6
		p-value	<0.001
		Decision	Reject Null Hypothesis
		Interpretation	<i>Significant</i>
Willingness to learn basic Filipino Sign Language			
	Interest in learning FSL	Communicating with Deaf using FSL	Comfort level in using FSL
x ²	4.53	6.70	4.51
df	4	6	6
p-value	0.340	0.350	0.608
Decision	Retain Null Hypothesis	Retain Null Hypothesis	Retain Null Hypothesis
Interpretation	<i>Not Significant</i>	<i>Not Significant</i>	<i>Not Significant</i>
Overall Level of Willingness		x ²	5.35
		df	6
		p-value	0.500
		Decision	Retain Null Hypothesis
		Interpretation	<i>Not Significant</i>

Note: Results of Significant relationship between the program of allied health students and their level of awareness and willingness to learn basic Filipino Sign Language degree of freedom (6), p – value (> 0.05) (Significant), Degree of freedom (6), p – value (< 0.05) (Not Significant)

Table 19 presents the Chi-square results analyzing the relationship between the academic program of allied health students—specifically Nursing, Midwifery, and Respiratory Therapy—and their level of awareness and willingness to learn basic Filipino Sign Language. The results reveal a significant relationship between students’ program of study and their awareness of FSL, particularly in terms of their understanding of its role and importance, as well as their overall awareness of. The Chi-square values for these components— “Role of FSL” ($\chi^2 = 23.60$), “Importance of FSL” ($\chi^2 = 21.60$), and “Overall Awareness” ($\chi^2 = 25.40$)—were all statistically significant with p -values below 0.05. This suggests that awareness of FSL varies notably across different allied health disciplines, with students from some programs demonstrating higher awareness of its relevance in healthcare than others. In contrast, no significant relationship was found between students’ academic programs and their willingness to learn basic FSL. The Chi-square values for all components—Interest, Communication, Comfort Level, and Overall Willingness—were not statistically significant, as indicated by p -values greater than 0.05. These results indicate that regardless of their specific program, students generally exhibit similar levels of willingness to learn basic FSL. Overall, the findings imply that while awareness of FSL is influenced by the students’ field of study, their willingness to learn the language remains consistent across different allied health programs, highlighting a shared openness to basic FSL education among the student body. This suggests that despite minor differences among disciplines, students widely acknowledge its significance in healthcare communication. Their strong awareness reflects a common understanding of the need for inclusive interaction with Deaf patients. It further suggests that allied health students are prepared to support the integration of FSL in their academic and clinical training. This overall awareness provides a solid base for strengthening efforts within their program to promote inclusive care.

Bialza et al. (2023) revealed that nursing students possess a positive perception toward the integration of Sign Language and Braille into their curriculum, indicating heightened awareness of their value in therapeutic communication and patient care. This finding aligns with the significant relationship observed between students’ academic programs and their awareness of the role and importance of Filipino Sign Language. Similarly, Gračanin (2020) and Leftridge (2022) emphasized that nurses serve as frontline communicators for Deaf patients, underscoring the importance of introducing communication tools like FSL early in healthcare education. For midwifery students, Baloyi et al. (2023) highlighted the communication challenges experienced when caring for Deaf mothers, often stemming from limited preparedness—possibly contributing to lower awareness within this group. In contrast, Almotery et al. (2024) and Chavez (2024) emphasized the significance of nonverbal communication among respiratory therapy students and noted the empowering impact of sign language in clinical practice, suggesting that varying degrees of exposure across programs shape students’ recognition of FSL’s relevance. Despite these differences in awareness, the overall willingness to learn FSL did not significantly differ across programs. This is supported by Terry and Meara (2024), who found that Deaf awareness training during undergraduate education fosters confidence and enthusiasm across health disciplines. These findings suggest that while awareness may vary by academic program, the consistent willingness to embrace FSL reflects a shared commitment among allied health students to promote inclusive communication in patient care.

Table 20: Results of Significant relationship between the background in FSL of allied health students and their level of awareness and willingness to learn basic Filipino Sign Language

Awareness in Basic Filipino Sign Language			
	Existence of FSL	Role of FSL	Importance of FSL
χ^2	16.0	3.26	2.08
df	3	3	3

p-value	0.001	0.353	0.555
Decision	Reject Null Hypothesis	Retain Null Hypothesis	Retain Null Hypothesis
Interpretation	<i>Significant</i>	<i>Not Significant</i>	<i>Not Significant</i>
Overall Level of Awareness		x^2	5.18
		df	3
		p-value	0.153
		Decision	Retain Null Hypothesis
		Interpretation	<i>Not Significant</i>
Willingness to learn basic Filipino Sign Language			
	Interest in learning FSL	Communicating with Deaf using FSL	Comfort level in using FSL
x^2	1.12	3.99	5.13
df	2	3	3
p-value	0.570	0.263	0.163
Decision	Retain Null Hypothesis	Retain Null Hypothesis	Retain Null Hypothesis
Interpretation	<i>Not Significant</i>	<i>Not Significant</i>	<i>Not Significant</i>
Overall Level of Willingness		x^2	5.31
		df	3
		p-value	0.151
		Decision	Retain Null Hypothesis
		Interpretation	<i>Not Significant</i>

Note: Results of Significant relationship between the background in FSL of allied health students and their level of awareness and willingness to learn basic Filipino Sign Language degree of freedom (3), p – value (> 0.05) (Significant), Degree of freedom (3), p – value (< 0.05) (Not Significant)

Table 20 presents the analysis of the relationship between students’ background in basic Filipino Sign Language (FSL) and their levels of awareness and willingness to learn it. Among the awareness–related variables, only the “Existence of FSL” was found to have a statistically significant relationship with background in Filipino Sign Language, as shown by a Chi-square value of 16.0 ($p = 0.001$), which falls below the 0.05 level of significance. This indicates that students with previous exposure to Filipino Sign Language are more likely to be aware of its existence compared to those without any background. On the other hand, no significant relationships were found between background and other awareness factors, such as the perceived role and importance of basic FSL, or with overall awareness of ($x^2 = 5.18$, $p = 0.159$). This suggests that having a background in Filipino Sign Language does not necessarily enhance a student’s broader understanding of its significance in communication or healthcare. Similarly, in terms of willingness to learn basic Filipino Sign Language, the data showed no significant relationships across all components, including interest, communication, comfort, and overall

willingness ($\chi^2 = 5.31, p = 0.151$). This implies that prior experience with Filipino Sign Language does not influence a student’s motivation or openness to learn the language. Even students without prior exposure may be equally willing to engage in basic FSL language. In summary, while prior background in basic FSL appears to increase awareness of its existence, it does not significantly impact students’ overall understanding of its value or their willingness to learn it, highlighting the potential for effective basic Filipino Sign Language promotion even among those with no prior exposure.

The findings of Bialza et al. (2023) collectively indicate the perceptions and preferability of nursing students regarding the inclusion of Sign Language and Braille as an elective course in their curriculum. Recognizing the communication challenges faced by deaf and blind individuals in healthcare settings, the research aims to equip future nurses with vital communication skills. Using a descriptive correlational design, the study surveyed 259 Bachelor of Science in Nursing students at Far Eastern University - Dr. Nicanor Reyes Medical Foundation. A stratified sampling method was employed to ensure representation across various year levels. The findings of the study suggest that nursing students generally have a positive attitude towards learning Sign Language and Braille. Statistical analysis using Spearman’s Rank Order Correlation demonstrated a significant positive correlation between perception and preferability, suggesting a heightened awareness and deeper understanding of the advantages of these skills foster a greater willingness to acquire them. It concludes that nursing students acknowledge the importance of Sign Language and Braille in enhancing communication and patient care for individuals who are deaf or blind and are inclined to take it as an elective to enhance their therapeutic communication skills.

Table 21: Results of Significant relationship between the background (form of exposure or learning) in FSL of allied health students in their level of awareness and willingness to learn basic Filipino Sign Language

Awareness in Basic Filipino Sign Language			
	Existence of FSL	Role of FSL	Importance of FSL
χ^2	26.6	16.7	24.6
df	15	15	15
p-value	0.032	0.338	0.056
Decision	Reject Null Hypothesis	Retain Null Hypothesis	Retain Null Hypothesis
Interpretation	<i>Significant</i>	<i>Not Significant</i>	<i>Not Significant</i>
Overall Level of Awareness		χ^2	17.3
		df	15
		p-value	0.299
		Decision	Retain Null Hypothesis
		Interpretation	<i>Not Significant</i>
Willingness to learn basic Filipino Sign Language			
	Interest in learning FSL	Communicating with Deaf using FSL	Comfort level in using FSL
χ^2	6.22	28.4	26.7

df	10	15	15
p-value	0.797	0.019	0.032
Decision	Retain Null Hypothesis	Reject Null Hypothesis	Reject Null Hypothesis
Interpretation	<i>Not Significant</i>	<i>Significant</i>	<i>Significant</i>
Overall Level of Willingness		χ^2	26.7
		df	15
		p-value	0.032
		Decision	Reject Null Hypothesis
		Interpretation	<i>Significant</i>

Note: Results of Significant relationship between the background (form of exposure or learning) in FSL of allied health students in their level of awareness and willingness to learn basic Filipino Sign Language degree of freedom (15), p – value (> 0.05) (Significant), Degree of freedom (15), p – value (< 0.05) (Not Significant)

Table 21 displays the Chi-square test results analyzing the relationship between students’ background in Filipino Sign Language (FSL) defined as any prior exposure or learning and their levels of awareness and willingness to learn basic Filipino Sign Language. In terms of awareness, only the variable concerning the “Existence of FSL” demonstrated a statistically significant relationship with students’ FSL exposure background ($\chi^2 = 26.6$, $df = 15$, $p = 0.032$). This finding supports the rejection of the null hypothesis, indicating that students’ awareness of FSL’s existence is meaningfully shaped by how they were previously exposed to the language. Those with more substantial experiences—such as formal instruction or direct interaction with the Deaf community—tend to show higher awareness in this regard. On the other hand, the variables of “Role of FSL” ($\chi^2 = 16.7$, $p = 0.338$), “Importance of FSL” ($\chi^2 = 24.6$, $p = 0.056$), and the “Overall Level of Awareness” ($\chi^2 = 17.3$, $p = 0.299$) did not yield statistically significant results. These outcomes suggest that the form of FSL exposure does not significantly influence students’ understanding of the language’s role and importance, nor does it strongly affect their overall awareness level beyond recognizing its existence. In contrast, results related to willingness to learn basic FSL show more significant relationships with FSL exposure. Variables such as “Communicating with Deaf using FSL” ($\chi^2 = 28.4$, $p = 0.019$), “Comfort Level in using FSL” ($\chi^2 = 26.7$, $p = 0.032$), and “Overall Willingness” ($\chi^2 = 27.5$, $p = 0.025$) all showed statistically significant relationships. These findings imply that students with more direct or meaningful exposure to FSL—such as through formal education or interaction with Deaf—are more willing and comfortable engaging with the language, particularly in real-life communication scenarios. However, “Interest in learning FSL” ($\chi^2 = 6.22$, $p = 0.797$) was not significantly influenced by the type of exposure. This suggests that students, regardless of how they were introduced to FSL, generally express a consistent interest in learning it—indicating a widespread positive attitude toward basic FSL across all forms of prior exposure. In conclusion, while the type of exposure of learning background in FSL has a limited impact on awareness—primarily affecting recognition of the language’s existence, it plays a more influential role in shaping students’ willingness to learn and use basic FSL, especially regarding communication and confidence. These findings underscore the value of providing meaningful and practical experiences with FSL to encourage greater willingness and ease in inclusive communication.

These findings align with the study of Niebla (2021), who found that professionals with some level of exposure to Deaf individuals were generally aware of Deaf culture and made efforts to communicate, but this awareness did not significantly vary based on experience. Like in the present study, Niebla concluded that superficial exposure is not enough to develop a deeper appreciation or skill set in FSL. Instead, the study emphasized the necessity of structured and formal training programs to enhance both awareness and actual communication ability. Thus, the results reinforce the idea that although FSL background helps improve basic awareness and

willingness to communicate, it must be paired with formal education to have a meaningful and lasting impact on students' understanding and use of the language.

Problem 5: The significance difference in the level of awareness and willingness to learn basic Filipino Sign Language among allied health students when grouped according to their demographic profile:

Table 22: Results of significant difference in the level of awareness and willingness to learn basic Filipino Sign Language among allied health students when grouped according to their age

Outcome Measured	χ^2	df	p-value
Awareness	14.36	4	0.006
Willingness	7.28	4	0.122

Note: Results of significant difference in the level of awareness and willingness to learn basic Filipino Sign Language among allied health students when grouped according to their age degree of freedom (4), p – value (> 0.05) (Significant), Degree of freedom (4), p – value (< 0.05) (Not Significant)

The results demonstrate a statistically significant difference in the level of awareness of basic Filipino Sign Language among allied health students when grouped according to age. This is evidenced by a Chi-square value of $\chi^2 = 14.36$ with 4 degrees of freedom and a p-value of 0.006. Since the p-value is below 0.05 significance level, the null hypothesis is rejected. This indicates that students' age significantly influences their level of awareness regarding FSL, with some age groups being more aware than others. In contrast, the analysis shows no significant difference in students' willingness to learn basic Filipino Sign Language based on age, as reflected in a Chi-square value of $\chi^2 = 7.28$ (df = 4) and a p- value of 0.122. Given that the p-value exceeds the 0.05 threshold, the null hypothesis is retained, suggesting that age does not significantly affect students' willingness to learn basic Filipino Sign Language. This implies that while awareness may vary with age, the motivation or interest to learn remains relatively stable across age groups.

Table 23: Pairwise Comparisons – Level of Awareness

		W	P
12 to 17	18 to 24	2.25	0.503
12 to 17	25 to 34	1.164	0.924
12 to 17	35 to 44	1.391	0.863
12 to 17	45 to 54	1.000	0.955
18 to 24	25 to 34	-4.851	0.005
18 to 24	35 to 44	-0.877	0.972
18 to 24	45 to 54	-0.613	0.993
25 to 34	35 to 44	1.142	0.929
25 to 34	45 to 54	0.743	0.985

Note: W = test statistic for pairwise comparison of age groups. Significance was set at $p < 0.05$. Results with $p < 0.05$ were interpreted as statistically significant (reject the null hypothesis), while results with $p > 0.05$ were interpreted as not statistically significant (retain the null hypothesis)

To further examine the significant differences in awareness identified in Table 20, pairwise comparisons between age groups were conducted. The analysis revealed that the only statistically significant difference occurred between the 18 to 24 and 25 to 34 age groups, with a test statistic of $W = -4.851$ and a p-value of 0.005. This suggests that students aged 18 to 24 have a significantly, likely higher level of awareness of basic Filipino Sign Language compared to those 25 to 34. All remaining pairwise comparisons showed no significant differences, as indicated by p-values far above the 0.05 significance level. These results imply that, aside from the contrast between 18–24 and 25–34 age groups, basic Filipino Sign Language awareness is generally consistent across other age ranges.

These findings align with the study of Krebs J et al. (202), which revealed that older participants' reaction times were notably slower than younger participants', regardless of when they learned the language. Although the study focused on syntactic processing in ÖGS, the results support the general notion that cognitive speed related to sign language processing tends to decline with age. When learning or using sign language systems like Filipino Sign Language (FSL), younger adults between the ages of 18 and 24 often show faster engagement and perhaps better awareness. Similarly, Mitchell T et al. 2020 discovered that young adults, particularly those from Generation Z, are often described as more aware and socially conscious due to their increased access to information and willingness to discuss social issues. This heightened awareness is linked to their upbringing in a digitally connected society and their active use of social media, which may magnify both positive and negative trends.

Table 24: Results of significant difference in the level of awareness and willingness to learn basic Filipino Sign Language among allied health students when grouped according to their sex

Outcome Measured	χ^2	df	p-value
Awareness	14.36	4	0.006
Willingness	7.28	4	0.122

Note: Results of significant difference in the level of awareness and willingness to learn basic Filipino Sign Language among allied health students when grouped according to their sex degree of freedom (4), p – value (> 0.05) (Significant), Degree of freedom (4), p – value (< 0.05) (Not Significant)

The findings present the Chi-square results assessing whether the level of awareness and willingness to learn basic Filipino Sign Language among allied health students differs based on sex. The analysis shows a Chi-square value of 12.62 for awareness, with a p-value of less than 0.001, which falls below the 0.05 significance level. This indicates a statistically significant difference in basic Filipino Sign Language awareness between male and female students. As a result, the null hypothesis is rejected, suggesting that sex plays a significant role in influencing students' awareness of basic FSL. On the other hand, the Chi-square value for willingness to learn basic Filipino Sign Language is 1.31, with a p-value of 0.252, which exceeds the 0.05 threshold. This means there is no statistically significant difference in willingness between male and female respondents. Therefore, the null hypothesis is accepted for this variable, indicating that both male and female students show similar levels of willingness to learn basic Filipino Sign Language.

Table 25: Pairwise Comparisons – Level of Awareness

		W	P
Male	Female	5.02	<.001

Note: Pairwise comparison revealed a statistically significant difference in the level of awareness between male and female students ($W = 5.02$, $p < .001$), with female students exhibiting a higher level of awareness of Filipino sign language scores

The data presents the pairwise comparison between male and female students regarding their level of awareness of basic Filipino Sign Language. The analysis yielded a W value of 5.02 and a p-value of less than 0.001, indicating a statistically significant difference between the two groups. The results show that female students have a higher level of awareness compared to their male counterparts. In conclusion, these findings suggest that sex significantly influences awareness of basic Filipino Sign Language, with females demonstrating greater awareness with the language. However, no significant difference was found in the willingness to learn basic Filipino Sign Language between male and female students. This implies that regardless of their level of awareness, both sexes are equally open and interested in learning the language.

These findings are supported by Kruse et al. (2021), who conducted a Deaf Awareness Workshop among 95 medical students, with most participants being female (90.5%). The study found that female students showed the highest baseline awareness and empathy toward the Deaf community, which the authors attributed to greater emotional sensitivity and interpersonal orientation commonly observed among women in healthcare training. Because the study had a significantly higher number of female respondents, the results reflected stronger trends in awareness among women. After the training, 93% of all participants reported increased confidence in communicating with Deaf individuals. Similarly, in the present study, 77.9% of students expressed confidence in using basic Filipino Sign Language, with female students showing significantly higher awareness—reinforcing the need to implement inclusive FSL training programs that can benefit students of all genders.

Table 26: Results of significant difference in the level of awareness and willingness to learn basic Filipino Sign Language among allied health students when grouped according to their year level

Outcome Measured	χ^2	df	p-value
Awareness	13.71	3	0.003
Willingness	1.72	3	0.633

Note: Results of Significant relationship between the program of allied health students and their level of awareness and willingness to learn basic Filipino Sign Language degree of freedom (3), p – value (> 0.05), Degree of freedom (3), p – value (< 0.05) (Not Significant)

The table presents the results of a Chi-square test conducted to examine whether significant differences exist in the levels of awareness and willingness to learn basic Filipino Sign Language among allied health students across different year levels. For awareness, the Chi-square value is 13.71 with 3 degrees of freedom and a p-value of 0.003, which is below the 0.05 level of significance. This indicates a statistically significant difference in awareness of basic FSL among students based on their year level, suggesting that academic progression may influence students’ familiarity with the language. On the other hand, the Chi-square result for willingness to learn basic Filipino Sign Language is 1.72, with p- value of 0.633, which is greater than the 0.05 threshold. This implies that willingness to learn basic FSL does not significantly differ across year levels. In conclusion, the findings suggest that a student’s year level plays a meaningful role in shaping their awareness of basic FSL but does not significantly affect their willingness to learn the language.

Table 27: Pairwise Comparisons – Level of Awareness

		W	P
1st Year	2nd Year	5.2122	0.001
1st Year	3rd Year	2.0078	0.487
1st Year	4th Year	1.8300	0.567
2nd Year	3rd Year	-2.9555	0.156

2nd Year	4th Year	-2.4146	0.320
3rd Year	4th Year	0.0965	1.000

Note: *W* = test statistic for pairwise comparison between year levels. Significance was set at $p < 0.05$. Results with $p < 0.05$ were interpreted as statistically significant (reject the null hypothesis), while results with $p > 0.05$ were interpreted as not statistically significant (retain the null hypothesis)

To further explore the significant difference in awareness of basic Filipino Sign Language across year levels, pairwise comparisons were performed between each group of students. The analysis revealed a statistically significant difference only between the 1st year and 2nd year students, with a *W*-value of 5.2122 and *p*-value of 0.001. This result indicates that 2nd year students possess a significantly higher level of awareness compared to those in their 1st year. All other pairwise comparisons, including those between 1st vs. 3rd, 1st vs 4th, 2nd vs. 3rd, 2nd vs. 4th, and 3rd vs. 4th year students did not yield significant differences, as their *p*-values exceeded the 0.05 threshold. In conclusion, the overall significant difference in awareness by year level appears to be primarily driven by the gap between 1st and 2nd year students. This disparity may be attributed to increased academic exposure to health communication concepts or involvement in community-based learning activities during the 2nd year of study.

Bialza et al. (2023) highlighted that nursing students exhibited a favorable attitude towards learning sign language and braille, using a stratified sampling method to ensure representation across different year levels. This implies that access to FSL related material might differ based on year level. Similarly, Kung et al. 2021 found that students in their clinical years experienced considerably greater exposure to Deaf culture and communication, because of heightened patient interactions and the inclusion of communication skills in their curriculum during the later years of study. These results correspond with the present outcome indicating that second year students, potentially having had more exposure, demonstrate considerably greater FSL awareness than first-year students.

On the other hand, the study indicated no notable difference in the willingness to learn FSL among different year levels, as shown by a high *p*-value (0.633). This finding is supported by Montezor 2024, who noted that students with little or no experience in FSL eagerly engaged in sign language workshops, motivated by principles of advocacy and inclusivity rather than academic status. Kung et al. 2021 also observed that numerous students, regardless of previous experience or exposure, showed significant willingness in learning sign language.

Table 28: Results of significant difference in the level of awareness and willingness to learn basic Filipino Sign Language among allied health students when grouped according to their program

Outcome Measured	χ^2	df	p-value
Awareness	17.58	2	<0.001
Willingness	4.18	2	0.124

Note: Results of Significant relationship between the program of allied health students and their level of awareness and willingness to learn basic Filipino Sign Language degree of freedom (2), *p* – value (> 0.05), Degree of freedom (2), *p* – value (< 0.05) (Not Significant)

This table presents the Chi-square test results evaluating whether there are significant differences in the levels of awareness and willingness to learn basic Filipino Sign Language among allied health students based on their academic program. The results reveal a statistically significant difference in awareness, with a Chi-square value of 17.58, 2 degrees of freedom, and a *p*-value of less than 0.001. Since the *p*-value is below the 0.05 significance level, the null hypothesis is rejected. This indicates that students’ awareness of basic Filipino Sign Language varies significantly depending on their program, suggesting that certain disciplines may provide more exposure or emphasis on inclusive communication practices. In contrast, the level of willingness to learn basic Filipino Sign Language does not show a significant difference across programs. The Chi-square value of 4.18 with a *p*-

value of 0.124 exceeds the 0.05 threshold, leading to the retention of the null hypothesis. This implies that regardless of academic background, students share a similar level of willingness to learn basic Filipino Sign Language.

Table 29: Pairwise Comparisons – Level of Awareness

		W	P
Bachelor of Science in Nursing	Bachelor of Science in Midwifery	-5.59	<.001
Bachelor of Science in Nursing	Bachelor of Science in Respiratory Therapy	1.22	0.665
Bachelor of Science in Midwifery	Bachelor of Science in Respiratory Therapy	4.61	0.003

Note: Pairwise comparisons (Wilcoxon W) revealed significant differences in awareness levels between Bachelor of Science in Nursing and Bachelor of Science in Midwifery ($W = -5.59, p < .001$) and BSM and BSRT ($W = 4.61, p = .003$). No significant difference was found between Bachelor of Science in Nursing and Bachelor of Science in Respiratory Therapy ($p = .665$)

The pairwise comparisons provide a clearer understanding of the significant differences in basic Filipino Sign Language among allied health programs identified in Table 25. A notable difference was found between Bachelor of Science in Nursing (BSN) and Bachelor of Science in Midwifery (BSM) students, with a test statistic of $W = -5.59$ and p-value of less than 0.001, indicating a significant gap in their levels of awareness. In contrast, no statistically significant difference was observed between Bachelor of Science in Nursing (BSN) and Bachelor of Science in Respiratory Therapy (BSRT) students, as shown by a W-value of 1.22 and p-value of 0.665, suggesting that their awareness levels are comparable. Meanwhile, a significant difference was also found between BSM and BSRT students ($W = 4.61, p = 0.003$), indicating that Bachelor of Science in Midwifery students differ substantially in awareness compared to their Bachelor of Science in Respiratory Therapy counterparts. These findings suggest that students in the BSM program exhibit significantly different levels of awareness compared to those in the Bachelor of Science in Nursing and Bachelor of Science in Respiratory Therapy programs, which likely contributed to the overall significant variation in FSL awareness across academic programs.

Baloyi et al. (2023) emphasized the critical role of midwives in supporting Deaf patients, while also pointing out that many midwives lack proper training in sign language and inclusive communication. This lack of preparedness often leads to misunderstandings, increased risk in maternal care, and breakdowns of communication. Baloyi advocates for the inclusion of sign language and visual communication strategies in midwifery education to close this gap. Similarly, Nursing and Midwifery Council (2023) stated that nurses are expected to meet the communication needs of all patients and must be trained early in their education to handle such responsibilities effectively and efficiently; this aligns with the high awareness observed among Bachelor of Science in Nursing (BSN) students in the current study.

Additionally, Chavez (2024) highlighted the importance of integrating sign language in Respiratory Therapy, noting that even exposure through general education subjects fosters inclusivity and strengthens interactions with Deaf individuals in clinical settings. Her insights reflect the strong awareness levels among BSRT students as observed in the pairwise comparisons. Overall, the data from Tables 25 and 26 reinforce existing literature, emphasizing the need to integrate Filipino Sign Language and inclusive communication training into all allied health programs, particularly in midwifery, where awareness remains notably limited.

Table 30: Results of significant difference in the level of awareness and willingness to learn basic Filipino Sign Language among allied health students when grouped according to their background in FSL

Outcome Measured	χ^2	df	p-value
Awareness	4.058	1	0.044

Willingness	0.606	1	0.436
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Note: Results of Significant relationship between the program of allied health students and their level of awareness and willingness to learn basic Filipino Sign Language degree of freedom (1), p – value (> 0.05), Degree of freedom (1), p – value (< 0.05) (Not Significant)

The findings indicate a statistically significant difference in the level of awareness of basic Filipino Sign Language between students with and without a background in FSL, as indicated by a Chi-square value of 4.058, $df = 1$, and a p value = 0.044. Since the p -value is less than the 0.05 significance level, the null hypothesis is rejected, indicating that students’ prior experience or exposure to FSL has a significant effect on their level of awareness. In contrast, no significant difference was observed in the level of willingness to learn basic FSL based on FSL background. The Chi-square value for this comparison is 0.606 with a p -value of 0.436, which exceeds the 0.05 alpha level. Therefore, the null hypothesis is accepted, indicating that willingness to learn basic FSL is not significantly affected by whether students have prior experience with FSL.

Table 31: Pairwise Comparisons – Level of Awareness

		W	P
No	Yes	2.85	0.044

Note: Pairwise comparisons revealed a significant difference in the level of knowledge between respondents with and without a background in Filipino Sign Language ($W=2.85$, $p= .044$), with respondents without a background demonstrating higher knowledge scores.

This table presents the results of the pairwise comparison assessing differences in the level of awareness of basic Filipino Sign Language (FSL) based on students’ background in FSL. The analysis reveals a statistically significant difference between students with prior FSL exposure and those without test statistics of (W) of 2.85 and a p -value of 0.044. This finding indicates that students who have previous experience or learning in FSL demonstrate significantly higher awareness of basic FSL compared to those with such background.

Table 32: Results of significant difference in the level of awareness and willingness to learn basic Filipino Sign Language among allied health students when grouped according to their background (form of exposure or learning) in FSL

Outcome Measured	χ^2	df	p-value
Awareness	7.74	5	0.171
Willingness	4.35	5	0.500

Note: Results of Significant relationship between the program of allied health students and their level of awareness and willingness to learn basic Filipino Sign Language degree of freedom (5), p – value (> 0.05), Degree of freedom (5), p – value (< 0.05) (Not Significant)

The table presents the results of the Kruskal-Wallis test, which examined whether the level of awareness and willingness to basic FSL among allied health students significantly varies based on their source of FSL experience. For awareness, the test produced a Chi-square (H) value of 7.74, with $d = 5$, and a p - value = 0.171. For willingness, the H value was 4.35, with $df = 5$, and a p -value = 0.500. Both computed H values are lower than the critical value of 11.070 at $df = 5$, and their p -values are greater than the alpha level of 0.05. Therefore, the null hypothesis is retained in both cases. This indicates that there is no statistically significant difference in awareness or willingness to learn basic FSL based on how students were exposed to Filipino Sign Language. Whether the exposure came through formal education, personal interaction, media, or other informal means, it did not result in notable variation in either awareness or willingness levels.

Pomeroy (2024) emphasized that early exposure to sign language has a significant and enduring influence on language development. These benefits extend beyond the DHOH population, as hearing children exposed to sign language at an early age also experience cognitive and social advantages. These results support the broader body of evidence suggesting that early engagement with sign language may help reinforce neural pathways associated with language processing, memory, and attentional control. Consequently, the integration of sign language into educational settings, not only for children but also for aspiring healthcare professionals, has gained recognition as a proactive and inclusive strategy to enhance communication competence and cognitive flexibility across diverse learning populations.

Problem 6: The program developed to improve the level of awareness and willingness of allied health students in Basic Filipino Sign Language:

Enhancement Program titled “**Signs of Care: Promoting Inclusive Care through the Language of Hands**” from the study of Level of Awareness and Willingness of Allied Health Students in Basic Filipino Sign Language: Basis for Program Enhancement Plan

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I. Rationale:

- A one-day intensive program is both practical and effective, enabling students to gain essential knowledge and foundational skills in Filipino Sign Language (FSL) within a condensed timeframe. By integrating theoretical instruction, hands-on practice, and simulated clinical scenarios, the program ensures participants understand the legal and ethical framework for inclusive communication (e.g., Republic Act of 11106) while also practicing direct interaction with patients using basic FSL. Implementing this program in a single day is strategic, as it minimizes interruptions to academic schedules while enhancing engagement and knowledge retention through concentrated learning. Additionally, the program promotes cultural awareness, empathy, and advocacy for equitable healthcare, encouraging students to apply inclusive practices both academically and professionally. Ultimately, this training equips allied health students to overcome communication barriers, improve patient-centered care, and contribute to a more inclusive healthcare environment.

II. Objectives:

General Objective:

- To enhance the awareness, skills, and willingness of allied health students in utilizing basic Filipino Sign Language (FSL) to promote inclusive and effective communication with Deaf and hard of hearing (D&HH) individuals within healthcare environments.

Specific Objectives:

By the end of the program, participants will be able to:

- Understand the fundamentals of Deaf culture and the importance of Filipino Sign Language (FSL) in fostering inclusive and effective communication in healthcare settings.
- Identify and explain the legal basis for the use of Filipino Sign Language (FSL) in the Philippines, with a focus on Republic Act No. 11106 (The Filipino Sign Language Act), and understand its significance and implications for inclusive healthcare service delivery.
- Demonstrate fundamental sign language communication skills relevant to clinical settings, such as using basic FSL for greetings, asking about vital signs, and delivering simple patient instructions to ensure effective interaction with Deaf and hard of hearing individuals.
- Develop cultural sensitivity and empathy in interactions with Deaf and hard of hearing (D&HH) individuals, both in academic settings and real-world healthcare environments, to support respectful, inclusive, and patient-centered care.
- Effectively apply basic Filipino Sign Language (FSL) in simulated clinical situations to enhance communication readiness, minimize language barriers, and promote patient centered care for members of the Deaf community.
- Promote inclusive healthcare by advocating for the integration of basic Filipino Sign Language (FSL) and Deaf awareness into both education curriculum and professional healthcare settings, fostering a more equitable and accessible environment for Deaf and hard of hearing individuals.

III. Target Beneficiaries:

- This program is tailored for allied health students who seek to develop effective communication skills within diverse patient populations. Open to all participants regardless of their prior sign language experience, it is especially valuable for those preparing for clinical placements or internships. The initiative aims to provide essential communication skills for interacting with Deaf and hard of hearing (D&HH) individuals, enhancing the overall quality of patient care. By reaching students during their academic training, the program promotes early development of inclusivity, empathy, and cultural sensitivity. It also encourages future healthcare professionals to take an active role in addressing communication barriers, fostering a more inclusive and equitable healthcare environment.

IV. Program:

1. Keynote Address: “Bridging the Gap in Healthcare: Why Language Matters”

Speaker: Deaf and Terp Corporation

- This session highlights the real-world challenges Deaf individuals encounter in healthcare environments, emphasizing the importance of communication access and the pressing need to implement inclusive practices.

2. Breaking the Silence – Understanding Inclusive Communication

In this session, we will delve into the essential elements of inclusive communication and their significance in healthcare practice.

- Legal and Ethical Foundations: Understanding Republic Act 11106 and the rights of patients to accessible communication.

- Barriers in Clinical Settings: Examining the common challenges and systemic gaps in providing care to Deaf patients.
- Role of Health Professionals: Emphasizing the responsibility of healthcare providers in promoting communication equity and ensuring inclusive care for all.

3. Learn the Language – Basic Filipino Sign Language for Healthcare

Speaker: Deaf and Terp Corporation

Participants will be guided through learning and practicing the following essential sign language skills:

- Basic Greetings and Patient Introductions: How to introduce oneself and address patients respectfully.
- Establishing Rapport and Building trust: Using approaches to creating a comfortable and supportive environment through non-verbal communication and culturally sensitive interaction.
- Communicating About Health and Discomfort: How to ask about pain, symptoms, and physical discomfort using clear and simple FSL phrases (e.g., “Are you in pain?” or “Where does it hurt?”).
- Common Hospital Phrases and Expressions: Useful everyday terms and instructions frequently used in clinical settings.

4. Simulation Workshop – Using FSL in Clinical Scenarios

- Students will engage in role-playing activities that simulate real-life healthcare scenarios using Basic Filipino Sign Language (BFSL). Working in small groups, they will practice patient interactions such as conducting check-ups, giving basic instructions, and providing comfort measures to enhance their communication skills in clinical settings.

5. Reflection and Advocacy Session: “Signs of Change”

- Participants will take time to reflect on what they have learned throughout the program. This will be followed by a brief commitment card activity, where each student will write down how they intend to advocate for Deaf- inclusive care in their future healthcare practice.

V. Implementation Plan:

Activities	Description	Program Coordinator	Timeline
Registration and Welcome	Participants will sign in upon arrival, after which an overview of the program will be presented, highlighting its objectives and the importance of inclusive care in healthcare settings.	Program Committee	30 minutes
Keynote Address: “Bridging the Gap in Healthcare: Why Language Matters”	This highlights the vital role of effective communication in ensuring safe, inclusive, and patient-centered care. The discussion emphasizes how language accessibility, including the use of sign language, reduces communication barriers and enhances healthcare outcomes for diverse populations.	Program coordinator	45 minutes
Session 1: Breaking the Silence – Understanding Inclusive	This session discusses the legal and ethical bases of inclusive communication in healthcare, including Republic Act No. 11106. It addresses common communication barriers experienced by Deaf patients in clinical settings	Deaf and Terp Corporation	1 hour

Communication	and emphasizes the crucial role of healthcare professionals in advancing communication equity and inclusive patient care.		
Session 2: Learn the Language – Basic Filipino Sign Language for Healthcare	This session provides guided learning and hands-on practice of Basic Filipino Sign Language for healthcare. Participants will learn essential greetings, patient introductions, ways to build rapport, and simple FSL phrases for communicating health concerns and common hospital instructions to support inclusive patient care.	Deaf and Terp Corporation	1 hour
Break	Snacks, restroom, and informal interaction	Program Committee	15 minutes
Session 3: Simulation Workshop – Using FSL in Clinical Scenarios	This activity involves structured simulations and role-playing exercises to immerse students in real-life healthcare scenarios that require the use of Basic Filipino Sign Language. Students will work in small groups and engage with simulated clinical situations, including patient assessment, routine check-ups, delivery of basic healthcare instructions, and providing comfort and reassurance.	Deaf and Terp Corporation	45 minutes
Reflection and Advocacy Session: “Signs of Change”	This session encourages participants to reflect on the program’s key learnings, followed by a commitment card activity where students express how they plan to advocate for Deaf-inclusive care in their future healthcare practice.	Program Committee, Deaf and Terp Corporation	30 minutes
Evaluation, Certificate Distribution, and Close	Participants complete the program evaluation, followed by the distribution of certificates and formal closing of the activity.	Academic Heads, School Admin, Program coordinator, Program Committee	30 minutes

VI. Monitoring and Evaluation:

- Collect peer feedback forms on session content, delivery, and relevance for future improvements.
- Assess facilitator observations from simulation activities to enhance training methods and scenario design.
- Review reflection and advocacy commitment cards to gauge long-term applicability and engagement.
- Evaluate end of program survey data to identify strengths, gaps, and areas for enhancement in the future sessions.

VII. Expected Outcomes:

- Increased awareness of Deaf culture and Filipino Sign Language (FSL).
- Strengthened understanding of legal and ethical responsibilities in healthcare.
- Basic FSL communication skills in clinical settings.
- Greater confidence in interacting with Deaf patients.

- Enhanced empathy and cultural sensitivity.
- Commitment to advocate for Deaf-inclusive healthcare.



Figure 5. Infographic for the Program Utilization (FRONT)

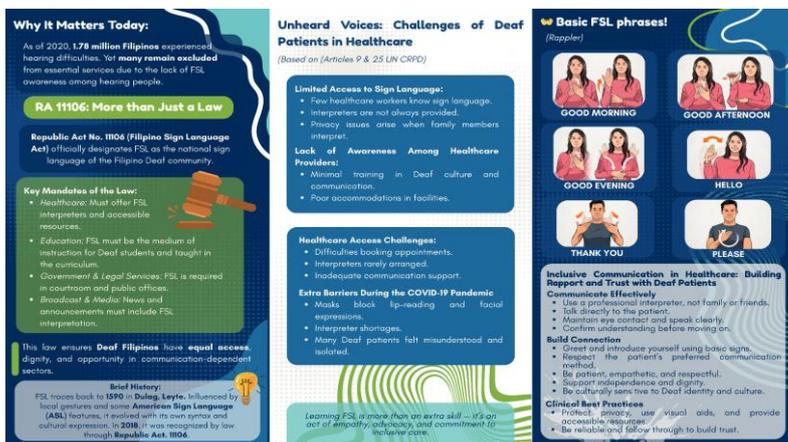


Figure 6. Infographics for the Program Utilization (BACK)

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter presents the summary of the study, the conclusions derived from the findings, and the recommendations for future initiatives and improvements in relation to the awareness and willingness of allied health students to learn basic Filipino Sign Language.

Summary and Findings

The primary objective of this study was to assess the awareness and willingness of allied health students specifically enrolled in the Nursing, Midwifery, and Respiratory Therapy programs to learn basic Filipino Sign Language. A quantitative research design was adopted, using a validated questionnaire that was administered through stratified random sampling. Data were analyzed using statistical tools such as Frequency and Percentage, Median, Spearman's Rho Correlation, and Kruskal-Wallis test.

1. This study involved a total of 257 allied health students from Mary Chiles College. In terms of age, the majority of the respondents were aged 18 to 24 years (87.5%), which aligns with the typical age range of college students. A smaller percentage fell within the 25 to 34 years (9.7%) followed by those aged 35 to 44 years (1.6%). Minimal presentation came from 12 to 17 years (0.8%) and 45 to 54 (0.4%).

In terms of sex, the sample was predominantly female, accounting for 70.4% of the total population, while male respondents accounted for 29.6%. This gender distribution reflects the common trends in allied health programs, where female enrollment typically exceeds that of males.

Regarding year level, the largest group of respondents were Level 2 students, comprising 30.4% of the sample. They were closely followed by Level 1 students at 29.6%. Level 3 students made up 26.8%, while Level 4 students constituted the smallest percentage at 13.2%. This suggests that a significant number are still in the early stages of their academic and clinical training.

With regard to academic programs, most of the respondents were taking the Bachelor of Science in Nursing, making up 79.0% of the total sample. Students from the Bachelor of Science in Midwifery accounted for 14.4%, while those enrolled in Bachelor of Science in Respiratory Therapy (BSRT) comprised 6.6%, showing a dominant representation of Bachelor of Science in Nursing (BSN) students which may influence overall findings.

Regarding their background in Filipino Sign Language (FSL), 37.4% of the students indicated having prior exposure, while 62.6% reported no previous experience with the language. Among those with prior exposure, the most frequently cited method was self-study or online learning, accounting for 16.7% of all respondents. This was followed by interaction with the Deaf community (8.9%), having a Deaf or hard of hearing family member (6.6%) and participation in previous coursework or training (3.5%). A small portion (1.6%) mentioned other forms of exposure such as media content, online platforms, films, television, or learning through a co-worker, whereas the remaining 62.6% marked "Not Applicable," affirming they had no exposure to FSL.

2. The findings revealed that allied health students had a moderate level of awareness of basic Filipino Sign Language, with a median score of 3.00, recognizing its purpose, role in communication with the Deaf community, and importance in healthcare settings. While allied health students acknowledged its significance in promoting inclusivity and effective patient care, gaps were observed in their knowledge of the legal basis of FSL, Deaf culture, and practical sign usage. These results highlight the need for greater exposure, educational reinforcement, and training opportunities to strengthen students' competence in using Filipino Sign Language, particularly in healthcare contexts.
3. The findings revealed that allied health students demonstrated a very high level of willingness to learn and use Basic Filipino Sign Language, with a consistent median score of 4.00 across indicators. Students expressed strong interest in acquiring FSL skills, recognizing its value in improving communication with Deaf individuals and its relevance to their future roles as healthcare professionals. Respondents were highly willing to participate in workshops, training, and inclusive community activities, as well as to promote FSL in educational and healthcare settings. Respondents also showed a strong commitment to communicating with Deaf patients, even without full fluency, and displayed advocacy for Deaf rights by using signs and gestures to ensure respect and inclusivity. Furthermore, students reported a high level of comfort and confidence in learning and practicing FSL, demonstrating openness to mistakes as part of the learning process and readiness to engage in real-life interactions with the Deaf community. Overall, these findings highlight that allied health students are not only eager but also socially and emotionally prepared to integrate FSL into their personal and professional development, underscoring the potential for successful program integration and enhancement.
4. The results revealed several significant relationships between the demographic variables of allied health students and their level of awareness and willingness to learn Basic Filipino Sign Language (FSL). Age was found to be significantly related to students' awareness and willingness, with younger students demonstrating higher awareness and greater willingness to communicate with the Deaf using FSL. Sex was also significantly associated with awareness, particularly in students' understanding of the role and importance of FSL, although no difference was observed in their willingness to learn. Year level showed a significant relationship only with awareness of FSL's role, suggesting that academic progression may slightly enhance understanding, while willingness remained consistent across year levels. The academic program of students was significantly linked to awareness of FSL's role, importance, and relevance in

healthcare, indicating that curriculum and clinical exposure may shape awareness, though willingness to learn was uniformly high across programs. Meanwhile, background in FSL was significantly associated with awareness of its existence, while the form of exposure to FSL (such as workshops, school activities, or self-study) was significantly related not only to awareness of existence but also to willingness, particularly in terms of communication, comfort, and overall readiness to learn. These findings emphasize that while demographic and academic profiles can influence levels of awareness, willingness to learn FSL remains strong and consistent among students, highlighting the need to strengthen curricular integration and structured exposure opportunities to further enhance both awareness and practical competence in FSL.

5. The results revealed that significant differences in the level of awareness of Basic Filipino Sign Language (FSL) were observed across several demographic factors, while willingness to learn remained consistently high across all groups. Age showed a significant difference, with students aged 25 to 34 demonstrating greater awareness compared to those aged 18 to 24, though willingness did not vary by age. Sex was also a factor, female students showing higher awareness than male students, although both sexes displayed similar levels of willingness. Year level differences were evident, as 2nd Year students exhibited higher awareness than 1st Years, reflecting the role of academic progression in shaping understanding, yet willingness to learn remained uniform across year levels. Awareness also varied by academic program, with Nursing and Respiratory Therapy showing higher awareness compared to Midwifery students, while willingness was equally strong across programs. Similarly, students with prior FSL background demonstrated significantly greater awareness than those without, though their willingness to learn did not differ. In contrast, no significant differences in awareness or willingness were observed when students were grouped according to the form of their exposure or learning background in FSL, suggesting that while exposure promotes familiarity, the method of learning does not substantially influence awareness or willingness. Overall, these findings emphasize that while awareness levels differ across profiles, students' willingness to learn FSL remains consistently high, underscoring the importance of strengthening awareness-building efforts while harnessing the strong motivation of students to support inclusive communication in healthcare.
6. The results of the study led to the development of a seminar program called "Signs of Care: Facilitating Inclusive Care through Language of Hands." This seminar is in response to the observation that allied health students are unaware and unwilling to learn and use Basic Filipino Sign Language (FSL). This also answers the study's aim of creating an inclusive environment and developing communication skills for future health workers in dealing with Deaf and hard of hearing (D&HH) individuals.

Most of all, the seminar aims to raise awareness, competence, and willingness of students to use FSL in healthcare settings for successful and inclusive communication. Thus, the program offers both theoretical and practical components. It entails learning principles and teachings about Deaf culture, the importance of inclusive communication, and the effects of Republic Act No. 11106 (Filipino Sign Language Act). Participants practice using FSL in role-plays that follow practical sessions teaching basic clinical practice concepts in FLS such as greetings, asking for vital signs, and giving instructions.

To address entirely the SOP of the study, the program flow emphasizes lectures, skill-based exercises, and reflective exercises. The course not only encourages competency but also promotes sessions for building empathy and cultural awareness through advocacy pledges. This seminar stands as a direct output of the study in order to give allied health students further insight into breaking barriers for communication while enhancing patient-centered care for the Deaf.

Conclusions

The results of this study concluded that allied health students had a moderate level of awareness of Basic Filipino Sign Language (FSL) but demonstrated a very high willingness to learn and use it. They recognized the importance of FSL in facilitating communication with Deaf patients and promoting inclusive healthcare, although their familiarity with institutional efforts, such as Republic Act No. 11106, and available learning

resources was limited. The study further showed that demographic factors influenced awareness but not willingness.

Younger students exhibited greater awareness than older students, female students showed higher awareness than male students, and second-year students showed higher awareness than first years, while Nursing and Respiratory Therapy students were more aware than Midwifery students. Despite these variations, willingness to learn FSL remained consistently strong across all groups. Prior exposure to FSL was also associated with higher awareness, particularly of its existence, though did not significantly affect willingness; however, immersive forms of exposure enhanced students' confidence and comfort in using the sign language.

Overall, the findings emphasize that while awareness varies by demographic profile, students across programs, year levels, and backgrounds share a uniformly high willingness to learn and apply FSL. This presents an important opportunity for Mary Chiles College to integrate FSL into healthcare education, addressing gaps in knowledge while building students' strong motivation. By adopting inclusive and gender-responsive teaching strategies, encouraging inter-professional collaboration, and providing experiential learning opportunities such as workshops, simulations, and community outreach, the institution can strengthen cultural competence and prepare future healthcare professionals to deliver more accessible, inclusive, and equitable services to the Deaf and hard-of-hearing community.

Recommendations

Based on the findings and conclusions of this study, the following recommendations are proposed to encourage the learning and application use of basic Filipino Sign Language (FSL) among allied health students and other key stakeholders:

Allied Health Students – actively participate in activities related to Filipino Sign Language (FSL), including workshops, seminars, and immersion programs, to strengthen both understanding and practical communication skills. Continue developing FSL skills through independent learning, collaboration with peers, and meaningful interactions with the Deaf community beyond the classroom environment.

Commission on Higher Education (CHED) – consider integrating basic Filipino Sign Language (FSL) into the Bachelor of Science in Nursing (BSN) and other allied health curricula, enabling future healthcare professionals to communicate more effectively with patients who are Deaf or hard of hearing. Incorporate Related Learning Experience (RLE) healthcare settings serving individuals with hearing loss, allowing students to practice their skills in real-world scenarios and deliver more inclusive and compassionate care.

Deaf and Hard of Hearing (D&HH) Individuals – partner with educational institutions by sharing real-world communication experiences and participating in FSL training to promote authenticity and cultural relevance. Contribute to the co-development of instructional materials and interactive activities that provide students with deeper insight into the lived realities of the Deaf community.

Deaf Awareness Groups and Programs – collaborate with colleges and universities to deliver regular training sessions, cultural orientation programs, and community immersion opportunities that enhance understanding of the Deaf experience and promote Deaf representation in curriculum development and institutional activities to ensure content remains authentic, inclusive, and culturally relevant.

Educators – embed Deaf awareness, Filipino Sign Language (FSL) communication, and inclusive healthcare practices into appropriate course modules and learning activities. Also, promote interprofessional learning and realistic stimulation experiences that encourage the practical application of FSL in healthcare settings.

Families of Deaf Individuals – support and engage in programs that enhance communication between healthcare providers and Deaf and hard of hearing family members. Encourage the inclusion of families' perspectives in the development of FSL training and healthcare initiatives to improve patient care experiences.

Future researchers – conduct a longitudinal and intervention-focused studies to evaluate the lasting impact of FSL education on the communication skills of allied health students and explore the perspectives and experiences

of Deaf and hard of hearing (D&HH) patients in clinical environments where FSL is utilized by healthcare providers. Lastly, investigate innovative and immersive FSL learning methods to determine their effects on student engagement, awareness, and readiness for real-world clinical interactions.

Healthcare professionals – incorporate basic Filipino Sign Language (FSL) into continuing education and professional development programs to support patient-centered care for Deaf and hard of hearing (D&HH) individuals and promote an inclusive and respectful healthcare environment by demonstrating effective communication techniques in everyday clinical interactions.

Policymakers – develop and strengthen national frameworks, policies, and legislation that support the inclusion of basic Filipino Sign Language in healthcare and education. Ensure communication barriers are reduced and the rights of Deaf and hard of hearing individuals are upheld through supportive institutional and legal measures.

School administrators – advocate for the integration of FSL training and Deaf awareness initiatives within all allied health programs to promote inclusive education and provide adequate funding, time allocation, and resources to ensure the long-term sustainability of FSL instruction and collaborative efforts with the Deaf community.

REFERENCES

1. Abuadas, M. H., Albikawi, Z. F., & Abuadas, F. H. (2021). Development and validation of questionnaires measuring registered nurses' competencies, beliefs, facilitators, barriers, and implementation of Evidence-Based practice. *Journal of Nursing Measurement*, 30(2), 238–255. <https://doi.org/10.1891/jnm-d-20-00085> Date Retrieved: September 2025
2. Abushaira M., et al. (2023). The Impact of Attitudes related to Knowledge, Skills, and Emotion on the Understanding of Sign Language among Medical Students. *Przestrzeń Społeczna (Social Space)*, Volume 23(1), 100–119. <https://socialspacejournal.eu/menu-script/index.php/ssj/article/view/162/71> Date Retrieved: November 2024
3. Agustin, K.E.L. (2023). Science helps promote inclusivity through use of Filipino sign language. Department of Science and Technology. <https://www.dost.gov.ph/knowledge-resources/news/78-2023-news/3359-science-helps-promote-inclusivity-through-use-of-filipino-sign-language.html> Date Retrieved: January 2025
4. Alamro, N., Alsaahil, S., Alhaqbani R., et al. (2023). Knowledge, Attitudes, and Practices Toward Deaf Patients Among Healthcare Workers in Saudi Arabia: 2020-2021. *Cureus* 15(11): e49655. DOI: 10.7759/cureus.49655 Date Retrieved: January 2025
5. Almotery, A., Bahamil, A.A., Alsehli, H.S., Alomari, R.A., Khann, M.A. & Kumar, R.S. (2024). Bridging Communication Gaps: A Study on Effective Patient Communication Among Respiratory Therapy Students and Interns. *Cureus*, 16(5). DOI: 10.7759/cureus.60484 Date Retrieved: March 2025
6. Baloyi, O.B., AL Walters, F. & Jarvis, M.A. (2023). Perceptions of midwifery students and their lecturers regarding challenges faced by deaf pregnant women in accessing maternity care. *African Journal of Reproductive Health*, Volume 27, No. 9. DOI: 10.29063/ajrh2023/v27i9.5. Date Retrieved: March 2025
7. Benilde School of Deaf Education and Applied Studies. (2022). Five facts about Filipino Sign Language. Benilde School of Deaf Education and Applied Studies. <https://sdeas.benilde.edu.ph/fivefactsaboutfsl/> Date Retrieved: November 2025
8. Bhandari, P. (2020). How to find the median | Definition, examples, & calculator. Scribbr. <https://www.scribbr.com/statistics/median/> Date Retrieved: March 2025
9. Bialza, E. A., Carillo, A.Z.L., De Vera, J.P.M., Eroles, G.M.V., Jamora, R.T.C., Licud, J.H.S., Maomay, A.I.S., Paculaba, A.P.G., Pitallano, A.B.L., Silvestre, A.B., & Tumbocon, B.S. (2023). Nursing students' perception and preferability of sign language-braille as an elective subject (Undergraduate thesis). Far Eastern University - Dr. Nicanor Reyes Medical Foundation Institute of Medicine. <https://library.feu-nrmf.ph/bib/12707> Date Retrieved: March 2025
10. Bisht, R. (2024). What is stratified sampling? Definition, types, and examples. *Researcher Life*. <https://researcher.life/blog/article/what-is-stratified-sampling-definition-types-examples> Date Retrieved: January 2025
11. Bisoy, E.T., & Oduca, C.A.F. (2024). Modified 3D-Convolutional Neural Network applied in dynamic

- Filipino Sign Language recognition. *International Journal for Multidisciplinary Research*, 6(6). <https://www.ijfmr.com/papers/2024/6/33572.pdf> Date Retrieved: November 2024
12. Cayme, K. J., Retutal, V. A., Salubre, M. E., Astillo, P. V., Cañete, L. G., & Choudhary, G. (2024). Gesture recognition of Filipino sign language using convolutional and Long Short-Term memory deep neural networks. *Knowledge*, 4(3), 358–381. <https://doi.org/10.3390/knowledge4030020> Date Retrieved: March 2025
 13. Chavez, A. (2024). How this CNM student is using American Sign Language to advance her medical degree. Central New Mexico Community College. <https://www.cnm.edu/news/how-this-cnm-student-is-using-american-sign-language-to-advance-her-medical-degree> Date Retrieved: January 2025
 14. Chong, E. Y., Jacob, S. A., Ramadas, A., Goh, P. H., & Palanisamy, U. D. (2021). Assessment of community pharmacists' communication and Comfort levels when interacting with Deaf and hard of hearing patients. *Pharmacy Practice (Granada)*, 19(2), 2274. Epub June 28, 2021. <https://doi.org/10.18549/pharmpract.2021.2.2274> Date Retrieved: November 2025
 15. Choo, N. C. G., Jimenez, Y. a. a. A., Kojima, K. E., & Morada, R. T. (2021). “I saw the sign”: Extent of Use of Filipino Sign Language and its Impact on Interpersonal Relationships in the Workplace among Deaf employees. *Animo Repository*. https://animorepository.dlsu.edu.ph/conf_shsrescon/2021/paper_ghi/6/ Date Retrieved: October 2024
 16. Daculan, M.D., Tan, A.J.O., & Ceniza-Canillo, A.M. (2022). The development and assessment of pattern matching algorithms used by ZEE: A Filipino Sign Language (FSL) dictionary and English-learning app. In S. Dita, A. Trillanes, & R.I. Lucas (Eds.), *Proceedings of the 36th Pacific Asia Conference on Language, Information and Computation* (pp. 842–852). Association for Computational Linguistics. <https://aclanthology.org/2022.paclic-1.93/> Date Retrieved: October 2024
 17. Department of Education. (2023). DepEd promotes Filipino Sign Language, other inclusive communication in 2023 NDAW kickoff. <https://www.deped.gov.ph/2023/11/10/deped-promotes-filipino-sign-language-other-inclusive-communication-in-2023-ndaw-kickoff/> Date Retrieved: January 2025
 18. Department of Linguistics - UP Diliman. (2023). Liberty Notarte-Balanquit presents Filipino Sign Language research. UP Diliman. <https://linguistics.upd.edu.ph/news/liberty-notarte-balanquit-presents-filipino-sign-language-research/> Date Retrieved: October 2024
 19. Department of Science and Technology — Science and Technology Information Institute. (2023). Science helps promote inclusivity through use of Filipino Sign Language. Department of Science and Technology. <https://www.dost.gov.ph/knowledge-resources/news/78-2023-news/3359-science-helps-promote-inclusivity-through-use-of-filipino-sign-language.html> Date Retrieved: October 2024
 20. Devi, B., Lepcha, M.N., Basnet, S. (2023). Application of Correlational Research Design in Nursing and Medical Research. *Xi'an Shiyuo Daxue Xuebao (Ziran Kexue Ban) / Journal of Xi'an Shiyuo University, Natural Sciences Education*, 65(11), 60-69. DOI: <http://dx.doi.org/10.17605/OSF.IO/YRZ68> Date Retrieved: October 2024
 21. Encarnacion, A.D.P. (2024). UP med students' MediSIGN aims to improve patients' access to health care. University of the Philippines. <https://up.edu.ph/up-med-students-medisign-aims-to-improve-deaf-patients-access-to-health-care/> Date Retrieved: November 2024
 22. Fránek, S. (2020). d/Deaf culture gives new meaning to multicultural studies. *QRCA Views*. <https://www.qrcaviews.org/2020/11/10/d-deaf-culture-gives-new-meaning-to-multicultural-studie> Date Retrieved: November 2024
 23. Gračanin, A. (2020). The Importance of the Nurse as Part of a Multidisciplinary Team in Care of Children With Disabilities. *Quality of Life (Banja Luka)*, Volume 18, No. 1–2. <https://doi.org/10.7251/QOL2001047G> Date Retrieved: March 2025
 24. Ham, J., Towle, A., & Shyng, G. (2020). Deaf and hard of hearing awareness training: A mentor-led workshop. *The Clinical Teacher*, 18(2), 180–185. <https://doi.org/10.1111/tct.13304> Date Retrieved: October 2024
 25. Iranifard, E., & Latifnejad, R.R. (2022). Comparative Research: An Old Yet Unfamiliar Method. *Journal of Midwifery & Reproductive Health*. 10(3), 3317-3318. DOI: <http://dx.doi.org/10.22038/jmrh.2022.66873.1954> Date Retrieved: November 2024
 26. Jenstad, L.M., Howe, T., Breaux G., Abel, J., Colozzo, P., Halas, G., Mason, G., Rieger, C., Simon, L., Strachan, S. (2024). Communication between healthcare providers and communicatively vulnerable

- patients with associated health outcomes: A scoping review of knowledge syntheses. *Patient Education and Counseling*, Volume 119. <https://doi.org/10.1016/j.pec.2023.10804> Date Retrieved: January 2025
27. Jetomo, C.B. & De Lara, M.L. (2025). Filipino sign language alphabet recognition using Persistent Homology Classification algorithm. *PeerJ Computer Science*, 11, e2720. <https://doi.org/10.7717/peerj-cs.2720> Date Retrieved: October 2024
 28. Junio, P.G.Y. (2024). On the sixth year of International Sign Language Day, we build a bridge to tomorrow: Why Filipino Sign Language needs us. *The Manila Collegian*. <https://mkule.medium.com/on-the-sixth-year-of-international-sign-language-day-we-build-a-bridge-to-tomorrow-66319f1c55ff> Date Retrieved: October 2024
 29. Krebs, J., Roehm, D., Wilbur, R. B., & Malaia, E. A. (2020). Age of sign language acquisition has a lifelong effect on syntactic preferences in sign language users. *International Journal of Behavioral Development*, 45(5), 397–408. <https://doi.org/10.1177/0165025420958193> Date Retrieved: December 2024
 30. Kruse J., Zimmermann, A., Fuchs, M., Rotzoll, D. (2021). Deaf Awareness and Workshop for Medical Students—An Evaluation. *GMS Journal for Medical Education*. <https://doi.org/10.21203/rs.3.rs-310779/v1> Date Retrieved: November 2024
 31. Kung, M. S., Lozano, A., Covas, V. J., Rivera-González, L., Hernández-Blanco, Y. Y., Diaz-Algorri, Y., & Chinapen, S. (2021). Assessing Medical Students' Knowledge of the Deaf Culture and Community in Puerto Rico: A Descriptive Study. *Journal of Medical Education and Curricular Development*, 8. <https://doi.org/10.1177/2382120521992326> Date Retrieved: December 2024
 32. Kwan, M., Jeemi, Z., Norman, R., & Dantas, J. a. R. (2023). Professional Interpreter Services and the Impact on hospital care Outcomes: An Integrative Review of literature. *International Journal of Environmental Research and Public Health*, 20(6), 5165. <https://doi.org/10.3390/ijerph20065165> Date Retrieved: December 2024
 33. Leftridge, V.C. (2022). Nurses leading in bridging the culture gap: Communicating with Deaf community (Doctoral project, Abilene Christian University). *Digital Commons @ ACU*. <https://digitalcommons.acu.edu/cgi/viewcontent.cgi?article=1503&context=etd> Date Retrieved: November 2024
 34. Lund, A., & Lund, M. (2025). Spearman's rank-order correlation using SPS Statistics. *Laerd Statistics*. <https://statistics.laerd.com/spss-tutorials/spearman's-rank-order-correlation-using-spss-statistics.php> Date Retrieved: December 2024
 35. Madronio, J.S., & Tuga, B.J. (2024). A proposed curriculum framework for Filipino Sign Language interpretation program in tertiary education. *International Journal of Thesis Projects and Dissertations*, 12(3), 1—10. <https://doi.org/10.5281/zenodo.12607039> Date Retrieved: November 2024
 36. Mcleod, S. (2025). Albert Bandura's Social Learning Theory. *SimplyPsychology*. <https://www.simplypsychology.org/bandura.html> Date Retrieved: April 2025
 37. Meimban, R.J., Pao, C.L., Aniez Jr., R.B., & Loresco, J.A. (2024) Development of speech to Filipino Sign Language for the deaf or mute Filipinos using Hidden Markov Model (HMM). *International Journal of Simulation Systems, Science & Technology*, 20(5), 6.1-6.6. <https://ijsst.info/Vol-20/No-5/paper6.pdf> Date Retrieved: September 2025
 38. Montezor, Z.M. (2024). Connecting through the sign: Filipino Sign Language workshop promoting inclusivity and safe spaces community. *Rotaract Philippines*. <https://rotaract.rotaryphilippines.com/2024/06/connecting-through-the-sign-filipino-sign-language-workshop-promoting-inclusivity-and-safe-spaces-community/> Date Retrieved: December 2024
 39. National Deaf Children's Society. (2025). *Communication*. <https://www.ndcs.org.uk/information-and-support/professionals/activities/resources/communication/> Date Retrieved: November 2024
 40. Narayan, N., Schechter, A., Mckee, M., et al. (2023). Deaf Health Pathway Immersing Medical Students in the Cultural and Language Aspects of Deaf Health. *Med.Sci.Educ.*, 33, 11–13. <https://pmc.ncbi.nlm.nih.gov/articles/PMC9862222/> Date Retrieved: November 2024
 41. Niebla, M.A.C. (2021). Filipino Sign Language skills and Deaf culture awareness in the hospitality industry. *Tourism and Sustainable Development Review Journal*, 2(1), 1–15. https://www.researchgate.net/publication/354384950_Filipino_Sign_Language_Skills_and_Deaf

- Culture_Awareness_in_Hospitality_Industry_Employability Date Retrieved: November 2024
42. Nursing and Midwifery Council (2023). Pre-2023 standards for education and training. Nursing and Midwifery Council. <https://www.nmc.org.uk/standards-for-education-and-training/pre-2023-standards-for-education-and-training/> Date Retrieved: November 2024
 43. Ong, G. (2024). Use of Filipino sign language pushed. Philstar.com. <https://www.philstar.com/headlines/2024/04/21/2349262/use-filipino-sign-language-pushed> Date Retrieved: October 2024
 44. Osorio, T.M., Mozo, R.A., Sabanilla, K.D., Gunay, N.S. (2024). WiKA: A Vision Based Sign Language Recognition from Extracted Hand Joint Features using DeepLabCut. Journal of Engineering, Environment, and Architecture Research, 3(1). DOI: 10.34002/jear.v3i1.75 Date Retrieved: October 2024
 45. Palaubsanon, M.L. (2024). DSWD-7 pushes the use of FSL. The Freeman. <https://www.philstar.com/the-freeman/cebu-news/2024/05/08/2353443/dswd-7-pushes-use-fsl/amp/> Date Retrieved: October 2024
 46. Parker, K., & Igielink, R. (2020). On the Cusp of Adulthood and Facing an Uncertain Future: What We Know About Gen Z So Far. Pew Research Center. <https://www.pewresearch.org/social-trends/2020/05/14/on-the-cusp-of-adulthood-and-facing-an-uncertain-future-what-we-know-about-gen-z-so-far/#:~:text=Some%2085%25%20say%20they%20use.mostly%20negative%20effect%20say%20this> Date Retrieved: November 2024
 47. Perlov, N.M., Urdang, Z.D., Spellun, A., Middleton, I., & Croce, J. (2023). DEAFMed: Deaf education and awareness for medical students. American Journal of Medical Quality, 38(4), 209-210. DOI: 10.1097/JMQ.000000000000105 Date Retrieved: November 2024
 48. Pomeroy, C.L. (2024). Enhancing Learning Through Sign Language. Bethel University. <https://spark.bethel.edu/cgi/viewcontent.cgi?article=2109&context=etd> Date Retrieved: November 2024
 49. Quinan, P.N.S. Dador, C., Gangang, C.M.D., et al. (2024). Deafening silence: Addressing the challenges faced by the Gen Z deaf community and Filipino Sign Language (FSL) in today's education. Cosmos: An International Journal of Art & Higher Education, 14(1). DOI: 10.46360/cosmos.ahe.520251012 Date Retrieved: September 2025
 50. Rappler. (2020). How the PH deaf community strives for inclusivity through Filipino Sign Language. Rappler. <https://www.rappler.com/moveph/filipino-deaf-community-strives-inclusivity-filipino-sign-language/> Date Retrieved: December 2024
 51. Rogers, A. (2020). The Filipino Sign Language Act in the Philippines: Policy analysis. Honors Capstones, 73. Gallaudet University. https://ida.gallaudet.edu/honors_capstones/73/ Date Retrieved: December 2024
 52. Samson, R. (2021). Theory of Planned Behavior. Accelerating Systemic Change Network. https://ascnhighered.org/ASCN/change_theories/collection/planned_behavior.html Date Retrieved: December 2024
 53. See, D.A. (2022). Parameters in hiring of Filipino sign language interpreter sought. Herald Express. https://baguioheraldexpressonline.com/parameters-in-hiring-of-filipino-sign-language-interpreter-sought/#google_vignette Date Retrieved: October 2024
 54. Sharma, A., Guo, D., Parmar, A., Ge, J., Li, H. (2024). Promoting Sign Language Awareness: A Deep Learning Web Application for Sign Language Recognition. In Proceedings of the 2024 8th International Conference on Deep Learning Technologies (ICDLT '24), pages 22–28. <https://doi.org/10.1145/3695719terry.3695723> Date Retrieved: October 2024
 55. Sherwani, R.A.K., Shakeel, H., Awan, W.B., Faheem, M., & Aslam, M. (2021). Analysis of COVID-19 data using neutrosophic Kruskal Wallis H test. BMC Medical Research Methodology, 21, 215. <https://doi.org/10.1186/s12874-021-01410-x> Date Retrieved: October 2024
 56. Siggnn. (2023). The importance of learning sign language. LinkedIn. <https://www.linkedin.com/pulse/importance-learning-sign-language-siggnn/> Date Retrieved: October 2024
 57. Sintos, M.L. (2020). Psychological distress of Filipino Deaf: Role of environment vulnerabilities, self-efficacy, and perceived functional social support. Asia Pacific Social Science Review, 20(3). <https://www.dlsu.edu.ph/wp-content/uploads/pdf/research/journals/apssr/2020-September-vol20-3/5-psychological-distress-of-filipino-deaf-role-of-environmental-vulnerabilities-self-efficacy-and->

- perceived-functional-social-support.pdf Date Retrieved: October 2024
58. Sreekumar, D., & Sreekumar, D. (2024). Differences between qualitative and quantitative research. Paperpal Blog. <https://paperpal.com/blog/press-release/differences-between-qualitative-and-quantitative-research> Date Retrieved: October 2024
 59. Stenger, M. (2022). 5 of the most powerful benefits of learning sign language. Berlitz. <https://www.berlitz.com/blog/benefits-learning-sign-language> Date Retrieved: November 2024
 60. Supreme Court of the Philippines. (2024). The Supreme Court TWG to draft rules on Filipino Sign Language interpreting in the judiciary holds an inaugural meeting. <https://sc.judiciary.gov.ph/supreme-court-twg-to-draft-rules-on-filipino-sign-language-interpreting-in-the-judiciary-holds-inaugural-meeting/> Date Retrieved: March 2025
 61. Tabingo, S.D., & Lovitos, A.H.R. (2025). Analyzing Filipino Sign Language through systemic functional linguistics. *International Journal of Research and Innovation in Social Science (IJRISS)*, 9(02), 4423-4434. DOI: <https://dx.doi.org/10.47772/IJRISS.2025.9020347> Date Retrieved: September 2025
 62. Terry, J., & Meara, R. (2024). A scoping review of Deaf awareness programs in Health professional education. *PLOS Global Public Health*. <https://doi.org/10.1371/journal.pgph.0002818> Date Retrieved: October 2024
 63. The Flame. (2023). PWDs struggle to communicate, find inclusive spaces despite the enhancement of sign language law. The Flame. <https://abtheflame.net/issues/2023/11/pwds-struggle-to-communicate-find-inclusive-spaces-despite-the-enactment-of-sign-language-law/> Date Retrieved: October 2024
 64. Tista, J.A. (2024). 'Senyas Kamay': DSWD R7 promotes Filipino sign language. Philippine Information Agency. <https://pia.gov.ph/senyas-kamay-dswd-r7-promotes-filipino-sign-language/> Date Retrieved: November 2024
 65. Turney, S. (2021). Frequency Distribution | Tables, Types & Examples. Scribbr. <https://www.scribbr.com/statistics/frequency-distributions/> Date Retrieved: March 2025
 66. Villaver, M. (2024). Refinement and Validation of research instrument for Assessing Executive Functioning Skills in the Post-Pandemic Education: the MEASURE Approach. *British Journal of Teacher Education and Pedagogy*, 3(1), 38–44. <https://doi.org/10.32996/bjtep.2024.3.1.4> Date Retrieved: September 3, 2025
 67. Wheatley, M. (2021). Barriers faced by deaf people while accessing healthcare. *European Disability Forum*. <https://www.edf-feph.org/blog/barriers-faced-by-deaf-people-while-accessing-healthcare/> Date Retrieved: November 2024
 68. WIKI: a vision-based sign language recognition from extracted hand joint features using DeepLabCuT. (2024). https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://journal-msugensan.org/index.php/JEEAR/article/download/75/37/&ved=2ahUKEwj0-In0s4eMAxWL2jQHHQ_zGBE4HhAWegQIVRAB&usq=AOvVaw1veq1dlj_nxf1KISNjAKUMv Date Retrieved: November 2024
 69. World Health Organization. (2024). Deafness and hearing loss. <https://www.who.int/news-room/fact-sheets/detail/deafness-and-hearing-loss> Date Retrieved: November 2024
 70. World Health Organization. (2021). World Hearing Day. WHO South-East Asia. <https://www.who.int/southeastasia/news/detail/03-03-2021-world-hearing-day-ms#:~:text=The%20WHO%20South%20East%20Asia%20Region%20is%20committed%20to%20addressing,110%20billion%20in%20the%20Region> Date Retrieved: November 2024
 71. Zhang, Y. & Jiang, X (2024). Recent Advances on Deep Learning for Sign Language Recognition. *ScienceDirect*. <https://doi.org/10.32604/cmes.2023.04573> Date Retrieved: March 2025