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МОВЛЕННЄВА ПАТОЛОГІЯ
(SPEECH-LANGUAGE PATHOLOGY)

Методичні рекомендації

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Анотація: Методичні рекомендації з курсу «Мовленнєва патологія (Speech-Language Pathology)» призначені для студентів 2-го року навчання спеціальності «Прикладна лінгвістика»; складаються із передмови та чотирьох частин, які містять опис та інформаційний обсяг навчальної дисципліни із питаннями лекцій та семінарів; завдання та самостійної роботи та ІНДЗ; статті для аналізу; глосарій основних понять і термінів.

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ПЕРЕДМОВА

Курс «Мовленнєва патологія» ознайомлює студентів із розладами мовлення, пов'язаними з органічними ураженнями та дефектами мовлення, які є наслідком недорозвинутих психічних функцій, зокрема різними типами афазій (еферентною, динамічною, аферентною, сенсорною, акустико-гностичною та ін.), порушеннями письмового мовлення (дислексією та дисграфією), дефектами мовлення (алалією, дисфонією, заїканням), мовою глухонімих, а також мовленнєвими порушеннями при розумовій відсталості – олігофренії тощо.

Предметом вивчення навчальної дисципліни є дослідження мовлення як одного з показників розумового розвитку, а також дослідження усіх структурних компонентів мовленнєвої діяльності з метою корекції мовленнєвих вад.

Метою викладання навчальної дисципліни «Мовленнєва патологія» є формулювання загальної концепції цього напрямку у прикладній лінгвістиці через детальний аналіз психічного розвитку осіб з вадами мовлення первинного походження, а також розробляються принципи і методи психокорекційної роботи з ними.

З огляду на визначення «мовленнєвої патології» як самостійної наукової галузі, яка має власний предмет і об'єкт вивчення, вирізняють її основні завдання:

- вивчення закономірностей та особливостей психічного розвитку осіб з порушеннями мовлення різного ступеня тяжкості й різної етіології;
- дослідження специфіки особистісного і соціального розвитку дітей з мовленнєвою патологією;

— вивчення впливу мовленнєвих розладів на психічний розвиток людини;

— поглиблене дослідження механізмів порушень психічного розвитку в дітей з порушеннями мовленнєвої діяльності;

— розробка психолого-педагогічних технологій ранньої профілактики, діагностики, виявлення й усунення порушень психічного розвитку в дітей з вадами мовлення;

— виявлення шляхів і механізмів компенсації та корекції вторинних відхилень;

— створення адекватних і ефективних корекційних програм психологічної роботи з дітьми, що мають порушення мовлення;

— визначення перспектив розвитку дітей з порушеннями мовлення й ефективних засобів їх навчання і виховання;

— аналіз досягнень у теорії та практиці вітчизняної та зарубіжної патопсихолінгвістики.

Згідно з вимогами освітньо-професійної програми студенти повинні:

знати :

- концептуальні основи дисципліни «Мовленнєва патологія» і визначення основних понять;
- становлення, розвиток та функції даної дисципліни;
- функції та будову головного мозку, ділянки мозку, які відповідають за продукування мови.
- причини виникнення мовленнєвої патології.
- мовленнєві розлади, спричинені локальним ураженням мовних центрів, розташованих у корі головного мозку.

- порушення письмового мовлення: дислексію та дисграфію.
- розлади зв'язного мовлення.

вміти :

- проводити диференційну діагностику норми і патології формування мовленнєвої діяльності у дітей та дорослих;
- аналізувати експресивне та імпресивне мовлення у дітей;
- здійснити дослідження процесів читання і письма.

На вивчення навчальної дисципліни відводиться 120 годин / 4 кредити ECTS.

ОПИС ТА ІНФОРМАЦІЙНИЙ ОБСЯГ НАВЧАЛЬНОЇ ДИСЦИПЛІНИ

Навчальна дисципліна складається з двох змістових модулів, які визначаються метою та змістом програми і відповідають кількості кредитів, передбачених навчальним планом на вивчення дисципліни протягом семестру.

Структура навчальної дисципліни подається у вигляді Таблиць 1 та 2.

Таблиця 1

Назви змістових модулів і Тем	Усього	Лек.	Практ.	Сам. роб.	Конс.
Змістовий модуль 1. Змістовий модуль 1. Функції та будова головного мозку. Ділянки мозку, які відповідають за продукування мови. Причини виникнення мовленнєвої патології.					
Тема 1. Language and the brain. Dominance. Localization. Neuropsychological models of language. (Функції та будова головного мозку. Ділянки мозку, які відповідають за продукування мови. Нейропсихолінгвістичні		2	2	10	1

моделі мови.)					
Тема 2. Language disability. The causes of language disability. (Причини виникнення мовленнєвої патології) .		2	2	10	1
Тема 3. Deafness. Types of deafness. Oralism vs manualism. Deaf signing a new perspective. (Неспроможність сприймання звукових подразників, втрата слуху, пониження слуху, при якому неможливе розбірливе сприйняття мови .Вроджена та набута глухота. Мова глухонімих.)		4	4	10	1
Всього годин:	49	8	8	30	3

Змістовий модуль 2. Мовленнєві розлади					
Тема 4. Aphasia. The effects of aphasia. Types of aphasia. Causes of aphasia. (Мовленнєві розлади,		4	4	10	2

<p>спричинені локальним ураженням мовних центрів, розташованих у корі головного мозку.</p> <p>Порушення фонематичної, морфологічної та синтаксичної структури власної мови при збереженні рухів мовленнєвого апарату та елементарного слуху. Види афазії (еферентна, динамічна, аферентна, сенсорна, акустико-гностична та ін.) та причини їх виникнення.)</p>					
<p>Тема 5. Dyslexia and dysgraphia. (Порушення письмового мовлення: дислексія та дисграфія. Види дислексії Фонематична дислексія. Семантична дислексія. Аграматична дислексія. Оптична дислексія . Мнестична</p>		4	4	10	1

дислексія. Аграфія як повна нездатність читати і писати.)					
Тема 6. Voice disorders. Articulation disorders. Fluency disorders. Language delay. (Порушення артикуляції та голосові дисфункції. Розлади зв'язного мовлення. Сповільнений розвиток мовних навичок.)		4	4	10	1
Тема 7. Modern developments. (Альтернативні системи комунікації. Сучасні розробки.)		2	2	8	1
Разом за змістовим модулем 2	71	14	14	38	5
Всього годин:	120	22	22	68	8

Таблиця 2

Назви змістових модулів і тем	Усього	Лек.	Практ.	Сам. роб.	Конс.
Змістовий модуль 1. Змістовий модуль 1. Функції та будова					

головного мозку. Ділянки мозку, які відповідають за продукування мови. Причини виникнення мовленнєвої патології.					
Тема 1. Language and the brain. Dominance. Localization. Neuropsychological models of language. (Функції та будова головного мозку. Ділянки мозку, які відповідають за продукування мови. Нейропсихолінгвістичні моделі мови.)		2	2	10	2
Тема 2. Language disability. The causes of language disability. (Причини виникнення мовленнєвої патології) .			2	15	2
Тема 3. Deafness. Types of deafness. Oralism vs manualism. Deaf signing a new perspective. (Неспроможність сприймання звукових		2	2	15	2

подразників, втрата слуху, пониження слуху, при якому неможливе розбірливе сприйняття мови .Вроджена та набута глухота. Мова глухонімих.)					
Всього годин:	56	4	6	40	6

Змістовий модуль 2. Мовленнєві розлади					
Тема 4. Aphasia. The effects of aphasia. Types of aphasia. Causes of aphasia. (Мовленнєві розлади, спричинені локальним ураженням мовних центрів, розташованих у корі головного мозку. Порушення фонематичної, морфологічної та синтаксичної структури власної мови при збереженні рухів мовленнєвого апарату та елементарного слуху.		2	2	10	2

Види афазії (еферентна, динамічна, аферентна, сенсорна, акустико-гностична та ін.) та причини їх виникнення.)					
Тема 5. Dyslexia and dysgraphia. (Порушення письмового мовлення: дислексія та дисграфія. Види дислексії Фонематична дислексія. Семантична дислексія. Аграматична дислексія. Оптична дислексія . Мнестична дислексія. Аграфія як повна нездатність читати і писати.)		2	2	10	1
Тема 6. Voice disorders. Articulation disorders. Fluency disorders. Language delay. (Порушення артикуляції та голосові дисфункції. Розлади зв'язного мовлення. Сповільнений		1	1	12	2

розвиток мовних навичок.)					
Тема 7. Modern developments. (Альтернативні системи комунікації. Сучасні розробки.)		1	1	12	2
Разом за змістовим модулем 2	64	6	6	44	8
Всього годин:	120	10	12	84	14

LECTURES

Lectures 1-2

- Speech pathology
- Who are speech pathologists and what they do
- Types of disorders
- Language and the brain

Lecture 3

- Language disability
- Causes of language disability
- Classification of language disorders
- Language disability vs. language delay

Lecture 4. Deafness

- Types of deafness.
- Oralism vs Manualism.
- Deaf signing – a new perspective.

Lectures 5-6

- Signs / symptoms of aphasia.
- Causes of aphasia.
- The effects of aphasia.
- Types of aphasia.
- Other symptoms.

Lectures 7-8

1. Types of dyslexia / dysgraphia
2. Causes of dyslexia / dysgraphia
3. Incidence
4. Causation
5. Features of different types of dyslexia / dysgraphia

Lecture 9. Speech-Language disorders.

1. Voice disorders.
2. Articulation disorders.
3. Fluency disorders.

Lecture 10.

1. Language delay.
2. Types of language delay.
3. Language delay vs. aphasia.
4. Language delay effects.
5. Language delay causes.

Lecture 11. Alternative communication systems.

- Types of communication systems.
- Basic techniques employed.
- Braille.
- Symbol systems.

SEMINARS

Seminar 1

1. Speech language pathology as a branch of science.
2. Types of disorders.
3. Language and the brain.
4. Dominance.
5. Discussing the gist of videos.

Seminar 2

1. Localization.
2. Language areas.
3. Neuropsychological models of language.
4. A critical period for language (the tragic case of genie that bears the critical period hypothesis).

Seminar 3

1. Language Disability.
2. The causes of language disability.
3. Types of language disability.

Seminars 4-5

1. Deafness. The audiogram.
2. Types of deafness.
3. Deaf signing – a new perspective.
4. Technological aids. Auditory implants. Subtitles for the deaf.
5. Written language and deaf children.

Seminars 6-7

1. Aphasia.
2. The effects of aphasia.
3. Types of aphasia.
4. Causes of aphasia.
5. Dyslexia and dysgraphia.
6. Other symptoms.

Seminar 8

1. Voice disorders – types and causes. Dysphonia / aphonia.
2. Articulation disorders – types and causes.
3. Fluency disorders – types and causes.
4. Treatment and programmes.

Seminars 9-10

1. Language delay.
2. Types of language delay.
3. Language delay vs. aphasia.

Seminar 11

1. Alternative communication systems. Braille. Symbol system.
2. Modern developments. (Lightwriter, Dynavox devices etc.).

ЗАВДАННЯ ДЛЯ САМОСТІЙНОГО ОПРАЦЮВАННЯ ТА ТЕМИ ДЛЯ ІНДЗ

На самостійне опрацювання з подальшим обговоренням під час консультацій пропонуються наступні питання:

1. Neurolinguistic processing. The homuncull. Language areas.
2. Slips of the tongue or brain? William Archibald Spooner – the producer of ‘spoonerisms’. Tongue slips classification.
3. A critical period for language. The tragic case of Genie that bears the critical period hypothesis.
4. Technological advances. Hearing aids. Auditory implants.
5. Technological advances. Visual aids.
6. The effects of aphasia (accounts of famous people: Samuel Johnson, Walter Scott and others)
7. Developmental dyslexia.
8. Laryngeal abnormalities. Laryngectomy. Artificial larynx.
9. Articulation disorders: cleft lip and palate.
10. Fluency disorders: cluttering.
11. Language delay: grammatical and pragmatic disability.
12. Language delay: Down syndrome, oligophrenia etc.

Індивідуальні завдання входять до кожного змістового модуля. Вони мають питому частку у підсумковій оцінці із залікового кредиту і відображають індивідуальну роботу студентів. Завдання виконуються студентами на основі знань, умінь та навичок, одержаних під час практичних занять; вони охоплюють зміст навчального курсу в цілому.

Беручи до уваги, специфіку даного навчального курсу, індивідуальними завданнями для студентів є написання рефератів, елементи аналізу текстів, тощо.

Індивідуальні завдання виконуються студентом в позааудиторний час, проте їхня презентація здійснюється на заняттях.

Підбір літератури для написання промови здійснюється самим студентом за порадою провідного викладача відповідно до інтересів, смаків і вподобань студента. Для студентів рекомендується наукова література як рідною, так й іноземною мовами у друкованому вигляді чи інтернет-ресурси.

Загальні вимоги до індивідуальної роботи наступні:

1) протягом терміну начитки лекцій та проведення практичних занять студент повинен опрацювати рекомендовану літературу із спецкурсу й написати виступ на обрану ним тему;

2) обсяг виступу – 2-3 сторінки;

3) у виступі мають бути присутні цитати та авторитетні посилання, фактична інформація тощо;

4) оцінювання здійснюється за участі студентів-слухачів.

Перелік питань:

1. Genetic disorders that affect speech.

2. Autism including Asperger syndrome (AS).

3. Adults with mild, moderate, or severe language difficulties as a result of: stroke.

4. Progressive neurological conditions. Alzheimer's disease.

5. Progressive neurological conditions. Multiple sclerosis.

6. Progressive neurological conditions. Motor neuron diseases.

7. Progressive neurological conditions. Parkinson's disease.
8. Mental health issues.
9. Cancer of the head, neck and throat (including laryngectomy)
10. Augmentative and alternative communication

СТАТТІ ДЛЯ АНАЛІЗУ

- I. **R. M. Miller, M. E. Groher (June 1993). Speech-language pathology and dysphagia: A brief historical perspective. *Dysphagia*, Volume 8, Issue 3, pp 180–184.**

Abstract. In the past decade, speech-language pathologists have taken a leading role in the management of services for patients with oropharyngeal dysphagia. This article presents the historical perspective of this role, the rationale for assuming the responsibility, and suggests directions for continued involvement.

Key words: Dysphagia -- Speech-Language pathologists -- Deglutition -- Deglutition disorders.

In recent years, the Joint Commission for Accreditation of Healthcare Organizations (JCAHO), the U.S. Department of Health and Human Services, and the Health Insurance Association of America have recognized the role of speech-language pathologists in the evaluation, management, and treatment of patients with swallowing impairments. In a 1988 Omnibus Survey, the American Speech-Language-Hearing Association (ASHA) reported that 42.5% of respondents indicated they regularly serve a population of patients with swallowing disorders. In all likelihood this percentage will continue to grow. The purposes of this article are to provide a brief historical perspective to account for the rapid development of dysphagia programs within the discipline of speech-language pathology, to comment on the degree to which the

professional role has been accepted by health organizations, and to describe the challenges that remain for the profession in this area.

Individuals within the profession of speech-language pathology have, to some degree, addressed the issues of oral feeding and swallowing since the 1930s. Initially, the oral motor disorders of children with cerebral palsy were managed by addressing both the speech and swallowing manifestations. During the 1970s and 80s, the clinical settings of speech-language pathologists began to evolve from what was once almost exclusively a public school and an ambulatory care population, to a practice in acute and chronic care medical institutions. The academic and clinical preparation of the speech-language pathologists made them unique in the medical setting. With a base that was akin to special education and behavioral psychology, a foundation in the anatomy and physiology of the oral, pharyngeal, and respiratory mechanisms was added. Clinical examination drew from the otolaryngologist's inspection and the neurologist's inventory of systems, including a more detailed mental status assessment that focused on the communication processes. Further, these clinicians represented therapists who performed their examinations for the purpose of discovering not only the deficits and impairments in functions but the patient's strengths and assets that could be used for rehabilitation. As the population of patients served by the profession often had coexisting communication and swallowing problems, and because the examinations and potential rehabilitation procedures overlapped, it was only logical that clinicians began to focus their efforts in the area of dysphagia.

efforts in the area of dysphagia.

Although many speech-language pathologists have been responsible for this professional focus on dysphagia, the careers of 2 professionals are

illustrative of how this growth began and was nurtured. The first, George L. Larsen, brought to the profession a unique health services background. His earliest working experiences had been in providing a variety of health-related services to Native Americans living in remote villages of Wyoming. Working with a public health nurse, Larsen often represented the only accessible health practitioner, and therefore, delivery of care was based solely on need. Once he completed his doctoral training in speech-language pathology, he continued to implement an approach to clinical problems that was both expeditious and pragmatic. Beginning in 1964, Larsen developed the speech pathology program at the Seattle V.A. Hospital.

Larsen's skills in the evaluation of the nervous system particular to communication were recognized by the Chief of Neurology, Henry Leffman. While making weekly rounds, Leffman challenged Larsen to do something for patients who had swallowing disorders. Leftman reasoned that because both speech and swallowing shared the same bulbar innervation, that to do something for acute swallowing dysfunction may have positive benefits on speech production. Agreeing that the approach to swallowing impairments was both poorly understood and often disorganized, Larsen began an exhaustive literature search, hoping to find guidance on how to manage the patient with oropharyngeal dysphagia. What he found was a literature full of information on swallow physiology, with a few isolated articles describing populations with oropharyngeal swallowing impairment such as from poliomyelitis and other progressive neurological disorders. Some of the earliest radiographic studies on patients with progressive neurological disease and dysphagia were completed by Dr. Martin Donner whose achievements we are saluting by this Festschrift. What was remarkably absent from the literature were reports on

the evaluation and treatment of the patient who experienced dysphagia of oropharyngeal origin.

As young residents working with Larsen, he informed us that we would begin to evaluate and treat patients who could not swallow; there was a need to begin a database on these patients. It was assumed we would be interested, and we trailed willingly to the sixth floor. None of us realized that in one sense we were to witness an important piece of history, later to become the largest recognized subspeciality in our field. Indelible in our minds was the first clinical evaluation and subsequent treatment that Larsen conducted on a young inpatient who had recently been shunted for occult hydrocephalus. The patient presented as an alert, somewhat agitated individual who, when given various stimuli to swallow, could not initiate a pharyngeal reflex. Other aspects of the physical examination were normal. Larsen concluded that because the patient did not respond to verbal cuing for swallow initiation that perhaps a stronger, more physiologic stimulus was needed. He had read that laryngeal elevation was crucial to the normal swallow, and now the problem remained on how to trigger its elevation. The following day we watched with guarded disbelief as Larsen approached the patient with a probe tip wrapped in gauze and dipped in saline that was attached to a large, brown, wood-veneered box that we later learned was the hospital's antiquated facial nerve stimulator. As he applied the electric current to the patient's thyroid notch, a pharyngeal swallow was initiated and the patient continued to swallow as if he had somehow "relearned" the sequence. Our collective elation and surprise that "treatment" could be so simple and successful was quickly dampened when Larsen warned that it could be dangerous to use such a technique with all

patients because of the potential life-threatening consequences of laryngospasm.

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II. L. J. Pierce, F. Genesee, A. Delcenserie, G. Morgan (2017). Variations in phonological working memory: Linking early language experiences and language learning outcomes. *Applied Psycholinguistics* 38, 1265–1300.

Keywords: cognitive and language processing components; early language experiences; language learning outcomes; phonological working memory; working memory

In order to build complex language from perceptual input, children must have access to a powerful information processing system that can analyze, store, and use regularities in the signal to which the child is exposed. In this article, we propose that one of the most important parts of this underlying machinery is the linked set of cognitive and language processing components that comprise the child's developing working memory (WM). To examine this hypothesis, we explore how variations in the timing, quality, and quantity of language input during the earliest stages of development are related to variations in WM, especially phonological WM (PWM), and in turn language learning outcomes. In order to tease apart the relationships between early language experience, WM, and language development, we review research findings from studies of groups of language learners who clearly differ with respect to these aspects of input. Specifically, we consider the development of PWM in children with delayed exposure to language, that is, children born profoundly deaf and exposed to oral language following cochlear implantation and internationally adopted children who have delayed exposure to the adoption language; children who experience impoverished

language input, that is, children who experience early bouts of otitis media and signing deaf children born to nonsigning hearing parents; and children with enriched early language input, that is, simultaneous bilinguals and second language learners.

From remarkably early, children are ready to acquire one or more native languages. During their first 12 months of life (starting from the last trimester of gestation) children are already building the fundamental pieces of what will become a complex language system. Initially, infants appear to establish language representations that are based on intonation, particularly that of their mother's voice, along with some rudimentary phonotactic properties of their target language(s). Exposure to specific language(s) allows children to form and fine-tune representations for specific language features, such as phonetic/phonological categories (or handshapes in the case of signed languages), as they zero in on the particular language(s) of their environment. At the same time, early neural biases as well as changes in underlying neural structure and function take place along with infants' developing language system in a way that aligns with the experiences they encounter. However, despite the prominent role that even the earliest experiences play in supporting and shaping language development, the influence of such early experiences on language outcomes is not well understood. In the present paper, we explore links between early language experiences and language learning and processing. Specifically, we explore the hypothesis that variation in the timing, quality, and/or quantity of early language input can affect the development of phonological working memory (PWM) via experience-based differences in the representation and processing of phonological elements of language. We

further argue that variation in the development of PWM can in turn influence language learning in the short and long terms.

Our focus on PWM arises from the premise that, in order to build complex language from perceptual input, children must have access to a powerful information processing system that can take in, analyze, and ultimately store the input to which a child is exposed. One of the most important parts of this underlying machinery is the linked set of cognitive and language processing components that comprise the child's developing working memory (WM). WM, particularly PWM, supports both the acquisition and the subsequent processing of language via the maintenance, processing, and storage of ambient language sounds. Because stimuli processed via PWM are language specific (i.e., phonological elements of a language), the development of PWM might be particularly influenced by language experiences that occur during the earliest stages of development when phonetic/phonological elements of language are initially acquired. Thus, although hypothetical at present, the influence of early experience on later language outcomes is arguably most likely to manifest through variation in phonological representations and their processing via PWM. However, the relationship between early experience, PWM development, and language acquisition has been difficult to tease apart. Insofar as the development of language and WM unfold more or less simultaneously, the influence of one on the other is difficult to examine; thus, the nature of the interaction between the two can go unnoticed. This is exacerbated by studies of WM development often focusing on monolinguals learning a single language under "typical" circumstances. In that case, individual differences in language experience may not provide enough variation to tease apart any relationship that might exist between early

language input and PWM. In contrast, research on groups of children acquiring language in a broader range of contexts than the typical monolingual language learner might encounter, specifically with respect to the timing, quantity, and quality of early language input, has revealed a pattern of PWM outcomes that seems to suggest a relationship between early experience and PWM development, to be discussed shortly. A close examination of these groups can thus shed light on the relationship between early language experience, the development of PWM, and subsequent language outcomes.

Продовження: https://www.cambridge.org/core/services/aop-cambridge-core/content/view/ED71C8781557E554C2DC7136BFA3FE63/S0142716417000236a.pdf/variations_in_phonological_working_memory_linking_early_language_experiences_and_language_learning_outcomes.pdf

III. E. Finch, J. Fleming, K. Brown, J. Lethlean, A. Cameron, S. M McPhail(December 2013). *The confidence of speech-language pathology students regarding communicating with people with aphasia.* BMC Medical Education.

Aphasia is an acquired language disorder resulting from damage to the brain; typically as a result of cerebrovascular accident or other neurological injury. Although figures vary internationally, studies on the incidence of aphasia suggest that approximately one quarter to one third of all individuals admitted to hospital with acute stroke will present with aphasia. Aphasia creates a substantial barrier to communication, frequently leading to social isolation and an inability to discuss or negotiate issues related to daily life including healthcare.

Previous research suggests that only 1.5 to 7.6% of the general population has basic knowledge about aphasia. Kagan reported that many people are often unaware of the cognitive and social competence of people with aphasia (PWA) and as a consequence avoid conversations with PWA. This can result in the exclusion of PWA from decisions about daily life and healthcare, and can have detrimental effects on the psychosocial wellbeing and quality of life of PWA. Involving PWA in their treatment planning can lead to increased patient motivation, increased effectiveness of health professional time use, and the achievement of more holistic management programs. Equipping health professionals with the skills and confidence to communicate effectively with PWA is, therefore, an important step towards optimizing patient involvement in rehabilitation.

In the healthcare setting, language barriers often prevent PWA from being involved in the design of their treatment programs or identification of rehabilitation goals. PWA may also be unable to ask questions about their medical condition or treatment. Evidence from an observational study in an acute stroke unit suggests that health professionals' level of knowledge, communication skills and attitudes can act as barriers to effective communication with individuals with aphasia in hospital. Knight et al. found that when communicating with stroke patients without aphasia, 22% of health professionals' time was devoted to the dissemination of health information; however, when communicating with stroke patients with aphasia, only 7% of the health professionals' time was spent on information dissemination. It was also found that health information was only provided to people with aphasia when a significant other was present. Two possible reasons for this observation proposed by the researchers were that health professionals may have reduced confidence when communicating with PWA, or secondly that many health professionals may not be aware of the competence and value of communicating with PWA. Patient-centred or client-centred care is now widely recognised as a foundation principle of appropriate healthcare and there is evidence that increased patient involvement in rehabilitation leads to better outcomes. The studies by Leach et al., Knight et al, and O'Halloran et al. all included speech-language pathologists (SLPs) in their health professional cohorts suggesting that communicating with PWA may be problematic even amongst SLPs. However the extent of the problem has not been investigated specifically for SLPs or SLP students.

Speech and language pathologists are viewed as communication experts in hospital settings. However, while all students receive theoretical

foundation knowledge about communicating with PWA through academic coursework, not all SLP students receive practical training during their coursework lectures in techniques to communicate with PWA prior to clinical education placements (where practical training refers to hands on experience communicating with PWA). The combination of the pressure of a novel clinical environment and unfamiliarity with the practical application of strategies to effectively communicate with PWA has the potential to create anxiety for novice students. In other health disciplines including medicine and nursing, clinical educators and students have reported a lack of preparedness to cope with the basic communication and interaction requirements inherent in client contact. This interfered with students' abilities to maximise learning during clinical education placements, and took the focus off student development in other domains such as goal-setting and clinical reasoning. Anxiety surrounding basic communication with clients may be even more critical for SLP students as they are interacting with individuals with a communication disability, so their interpersonal skills and clinical skills are closely interrelated. Indeed, qualitative research by Jagoe and Roseingrave suggested that SLP students may experience considerable apprehension at the prospect of communicating with PWA. During the study by Jagoe and Roseingrave the students wrote reflective letters to themselves at the start and completion of a service learning module, which involved pairs of students visiting a PWA. Data analysis involved thematic analysis of the letters. However, out of the cohort of 22 students who participated in the module, only eight students consented to their letters being used for the study, with only six of these students providing both pre and post letters. As a result, further research involving a larger student sample and a direct self-reported

confidence rating is required to investigate the confidence of SLP students when communicating with PWA.

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ГЛОСАПИЇ

- **Acquired dysgraphia** - the writing disorder caused by the onset of brain damage in adult life in people who have previously been literate.
- **Acquired dyslexia** - the reading disorder caused by the onset of brain damage
 - in adult life in people who have previously been literate.
- **Age-related hearing loss (presbycusis)** typically begins with the loss of higher frequencies, so that certain speech sounds – such as ‘s’, ‘f’ and ‘t’ – end up sounding very similar.
- **Agnosia (auditory / visual)** – a difficulty in recognizing familiar sensory stimuli.
- **Alternative systems** – completely replace normal language use.
- **Anarthria (or dysarthria)** – accompanying weakness or paralysis in the side of the body opposite the hemisphere which has been damaged.
- **Anomic aphasia** – difficulty with naming words, linked by their grammatical type (e.g. naming verbs and not nouns); or by their semantic category (e.g. words relating to photography but nothing else); more general naming difficulty. Grammatical, yet empty speech.
- **Aphasia** - a handicap of language comprehension and / or production caused by specific brain damage.
- **Apraxia or dyspraxia (articulatory / verbal)** – severe difficulty in controlling voluntary movements of limbs or vocal organs.
- **Audiologists** are clinicians who assess the nature and degree of hearing loss and conversation, and who advise on the rehabilitation of people with hearing impairment.

- **Augmentative systems** – designed to supplement normal language use.
- **Blissymbolics** – a visual supplement to speech, a set of symbols that could be “translated” into any language.
- **Cognitive-communication disorders** include problems organizing thoughts, paying attention, remembering, planning, and/or problem-solving. These disorders usually happen as a result of a stroke, traumatic brain injury, or dementia, although they can be congenital.
- **Central (cortical) deafness** - loss of hearing sensitivity due to damage of the auditory nerve in the brain stem or in the hearing centres of the cortex.
- **Conductive deafness** arises when there is interference with the transmission of sound to the inner ear.
- **Conduction aphasia** – deficits in the connections between the speech-comprehension and speech-production areas. Phonemic/literal, semantic/verbal paraphasic mistakes.
- **Deafness** (hearing loss, hearing impairment) is a partial or total inability to hear.
- **Deep dysgraphia** - no ability to spell on a phonetic basis; when a person is asked to write a dictated nonsense word, it is often replaced by a real word that is similar in sound; errors seem to be semantically related; the spelling of words with concrete meaning is better than that of words with abstract meaning.
- **Deep dyslexia** - when people are unable to read new or nonsense words, but in addition they make many semantic errors; visual errors;

errors that combine visual and semantic properties; words with concrete (as opposed to abstract) meanings are easier to read.

- **Development dyslexia** - when children fail at the tasks of reading, writing, and spelling, despite normal intelligence, instruction, and opportunity to learn.
- **“Direct selection”** – users type, touch, or point to the element of the message they wish to communicate, using any mobile body part to operate a variety of keyboards, switches, joysticks and pointing devices.
- **Disorders of resonance** – abnormal modifications of the sound vibration as it passes through the cavities of the vocal tract.
- **Disorders of phonation** – an abnormal kind of vibration in the vocal tract, as when the vocal folds fails to function normally. Manifest themselves mainly in abnormal qualities of pitch and loudness and in a range of breathy, husky, and a hoarse effects that are cumulatively labelled dysphonia.
- **Expressive aphasia** – short, meaningful phrases produced with great effort (non-fluent aphasia); small words omitted.
- **Expressive problems** – refer to the use of words and sentences to communicate messages to others.
- **“Fluctuating” Hearing Loss** - related to persistent middle-ear infections; may promote language delay and learning problems in school.
- **Global aphasia** – severe communication difficulties; extremely limited in the ability to speak / comprehend language; may be totally non-verbal.

- **Grammatical problems** – a restricted range of sentence constructions, uncertain control of word order, the avoidance of particular features in morphology and syntax.
- **Inner ear** – sound waves are picked up by a little spiral-shaped organ called the cochlea. Hair cells on the cochlea sense the vibration and pass the message – interpreted into electrical impulses – on to the brain via the cochlear nerve.
- **Language delay** - is a failure in children to develop language abilities on the usual age appropriate for their developmental timetable;
- **Language disability** - any systematic deficiency in the way people speak, listen, read, write or sign that interferes with their ability to communicate with their peers.
- **Language disorder** - when a person has trouble understanding others (receptive language), or sharing thoughts, ideas, and feelings (expressive language). Language disorders may be spoken or written and may involve the form (phonology, morphology, syntax), content (semantics), and/or use (pragmatics) of language in functional and socially appropriate ways.
- **Letter-by-letter reading** – patients find it necessary to name all the letters of a word (aloud or subvocally) before they can identify it.
- **Manualism controversies** - a “pure” sign language, uninfluenced by speech, should be learnt first, with other varieties coming later / or spoken language will be in use, and so a signing system related to the speech might as well be used from the outset (in case deaf children are born to parents with normal hearing).

- **Middle ear** – this is separated from the outer ear by the eardrum. The middle ear contains three tiny bones called the malleus (hammer bone), the incus (anvil bone) and the stapes (stirrup bone). These bones amplify the movement of the eardrum produced by sound waves. The Eustachian tube connects the middle ear to the back of the throat and helps to equalise air pressure.
- **“Non-SLIP”** – “Non-Speech Language Initiation Program” – made use of plastic symbols in various abstract shapes as a means of teaching syntactic sequences.
- **Pragmatic problems** - children fail to make use of norms of interaction appropriate to their age (an inappropriate use of questions, an inability to “keep to the point”).
- **Phonological dysgraphia** - when people can spell real words but not nonsense words (though they can sometimes read many of them, and speak them aloud).
- **Phonological dyslexia** - when people are unable to read on the basis of the “phonic” rules that relate graphemes to phonemes; they can manage to read familiar words, but they have great difficulty with new words or with simple nonsense words.
- **Phonological problems** manifest themselves in such areas as poor rhythmical ability, the persistence of immature processes of sound formation, difficulties in auditory discrimination.
- **Primary progressive aphasia (PPA)** is a focal dementia that can be associated with progressive illnesses or dementia, which is the gradual process of progressively losing the ability to think.

- **Production** – the whole sequence of neurological, physiological, and anatomical steps required to encode a linguistic message and make it ready for transmission. (the neurological complaint – slurred speech).
- **Progressive Jargon aphasia** is a fluent aphasia in which the patient’s speech is incomprehensible, but appears to make sense to them.
- **Oralism** – the exclusive teaching of speech.
- **Oralism controversies** - the kind of oral language to teach to children – natural conversation or a simplified input.
- **Otosclerosis** - a hereditary disorder in which a bony growth forms around a small bone in the middle ear, preventing it from vibrating when stimulated by sound.
- **Otologists** are doctors who have specialized in diseases of the ear.
- **Outer ear** – this is the part you can see. Its shape helps to collect sound waves. The tubular shape of the ear canal leads inward to the eardrum.
- **Receptive aphasia** – long sentences with no meaning, addition of unnecessary words, “neologisms”. Poor auditory and reading comprehension; fluent, senseless oral and written expression. Often unaware of their mistakes.
- **Receptive problems** – refer to the process of understanding what is said to the subject.
- **“Scanning”** – users wait while someone or something systematically scans a set of possible message elements and they indicate when the right element is reached.
- **Semantic problems** – a limited vocabulary.

- **Sensorineural deafness** arises when the source of interference lies within the inner ear, or along the auditory nerve to the brain.
- **Social communication disorders** occur when a person has trouble with the social use of verbal and nonverbal communication.
- **Spatial dysgraphia** - a defect in the understanding of space. This person has illegible spontaneously written work, illegible copied work, but normal spelling and normal finger tapping speed.
- **Speech disorder** - when a person has difficulty producing speech sounds correctly or fluently(e.g., stuttering is a form of disfluency) or has problems with his or her voice or resonance.
- **Speech-language pathologists (SLPs)** work to prevent, assess, diagnose, and treat speech, language, social communication, cognitive-communication, and swallowing disorders in children and adults.
- **Speech-language pathology** is a field of expertise practiced by a clinician known as a Speech-language pathologist (SLP), also called speech and language therapist, or speech therapist.
- **Surface dysgraphia** - when people can spell spoken nonsense words in a plausible way, but cannot spell irregular real words (biscuit → bisket); even regular words may be affected; seem to be dependent on using grapheme-phoneme conversion rules; whole-word spelling is impaired though not entirely lost.
- **Surface dyslexia** - when people are very poor at recognizing words as wholes, and rely greatly on a process of “sounding out” the possible relationship between graphemes and phonemes. Irregular words pose particular difficulty. A wrongly pronounced word will be given a

meaning on the basis of how it sounds, not how it looks; problem with homophones.

- **Swallowing disorders (dysphagia)** are feeding and swallowing difficulties, which may follow an illness, surgery, stroke, or injury.
- **“Talking books”** – texts recorded on audio devices.
- **The Kurzweil Reading Machine** – a device that reads printed characters and converts them into synthesized speech using a system of phonological rules.
- **The Optacon (Optical to Tactile Converter)** – the fingers rested on a set of vibrating rods that provided a tactile “image” of the text.
- **Tinnitus** - a hearing impairment concerned with a range of noises in the ear (ringing, hissing, pulsating, etc.) that can occur in acute or chronic form.
- **Visually based dyslexia** - when people fail to read the parts of a word correctly (near + light → night) or confuse words of similar appearance (met → meat; rib → ride). People can name the letters of the word correctly, but remain unable to identify the whole word.
- **“Vocal abuse”**, arising out of the lifestyle of the speaker – an excessive use of the voice, which in time causes chronic dysphonia.
- **Voice disorders** - an expressive disability in which people’s voice has a markedly abnormal quality (affects the pitch, loudness, and timbre), e.g. the harsh hoarseness, highly nasal qualities etc.