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Formulaic Language: The Building Block of Aphasic Speech

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Abstract

Aphasia is a condition that may appear when parts of the brain (Broca's or Wernicke's area) responsible for language production and processing are damaged. In most cases, patients have the left side of their brain affected. Thus, formulaic language remains intact in most cases. During speech therapy, this can be a solid base to build on. Formulaic language consists of formulas that are fixed phrases, stereotypes that behave as a single-unit lexical item. They have a significant role in language acquisition and fluent discourse production. These ready-made parts of speech are stored in the long-term memory. Studies suggest that the processing of formulaic language engages right hemisphere areas of the brain. Due to their language impairment, people with aphasia often have a lower quality of life, consequently social and professional integration for them being problematic. The investigation of preserved patterns, such as formulaic language and impairments related to different aspects of discourse, may provide insights both for clinical practice and for cognitive science, therefore, facilitating a more efficient approach to treatment.

Conclusion: This comprehensive review assesses what we know so far about the use of formulaic language in aphasic speech to get a more complex view on how to benefit from this knowledge during evaluation and speech therapy to facilitate recovery. These findings may also have implications for future research.

Keywords: aphasia, formulaic language, recovery, left and right brain hemisphere damage, speech therapy

1. Introduction

Referred to as automatic speech in the past, formulaic language incorporates fixed verbal utterances that are often metaphorically presented. Formulaic utterances on average can make up one-third to one-half of discourse production. As they represent an important part of everyday communication, it is necessary for the speech-language pathologist to focus on the scope of formulaic language in human communication [1, 2]. Portrayed in the forms of idioms, proverbs, expletives, collocations and so on, formulaic language is part and parcel of everyday speech [3]. These verbal forms of formulaic language are relevant in the acquisition of languages as well as the development of speech fluency. Owing to their importance regarding speech, these utterances are registered in one's long-term memory (LTM). For this reason, researchers have established a relationship between formulaic language and brain disorders and impaired speech [4].

Formulaic language describes a well-defined set of words, closely knitted in a lexical pattern to facilitate communication. Formulaic language plays an instrumental role in the acquisition, production and the overall use of language. Sources term the language as a prefabricated set of words and phrases found in the long-term memory of the brain to enable communication regardless of language disorders and similar linguistic problems. Language is majorly deployed by people with language and memory impairment, including dementia patients, older persons and individuals with psychoneurological disorders [1, 5]. It is important to note that what makes formulaic language a special focus for this study is that it represents an alternative communication model and therefore instrumental in enhancing the quality of life for persons excluded from the rules-based structure of communication used by other people of the society. Aphasia, on the other hand, is a linguistic problem that occurs when the Broca and the Wernicke areas of the brain are damaged. Aphasia patients have the left section of the brain damaged, but the effect does not tickle to the more delicate areas, particularly the section responsible for the storage of the long-term memory. This study offers a review of the existing body of research, particularly secondary literature, to identify the capacity of the formulaic language and its application in discourse formulation and application in clinical practices and cognitive science [3, 6].

2. Overview of aphasia in the context of formulaic language

Aphasia is a communicative complication and disorder that is experienced by individuals whose half left of the brain is affected in most cases. Since the half left side retains the language, it is inevitable for individuals to experience speech and language issues [7]. When the damage extends to one's right side of the brain, the damage is emphasised and surpasses the basic speech and language complications. It not only causes speech difficulties but also interferes with their reading, listening and writing skills. Since their intelligence is not affected, aphasia also causes problems of swallowing and motor speech complications (apraxia), among others. Insofar as formulaic expressions are incorporated into daily speech, they are more prominent in aphasic speech because of their role in language impairment. Linguists reckon that formulaic language is stored in the right side of the brain, and in most of the cases, a part of it can be retrieved immediately as the patient restarts producing verbal output again, which acts as a feasible channel in speech recovery [1].

Formulaic language was observed and mentioned by clinicians as a characteristic of aphasic speech long before linguists started researching it. Studying the language output of aphasic speakers can reveal the nature of formulaic utterances more than studying the output of normal speakers. Inasmuch, it is assumed that formulaic expressions, as they behave like single-unit lexical items, are stored and retrieved from the long-term memory engaging the right hemisphere areas of the brain. Hence, it is essential to understand their function in the different types of aphasia [5].

A survey conducted in a larger group of people with aphasia revealed that formulaic language is more frequently used in Broca's (non-fluent) aphasia than in Wernicke's aphasia [5].

To delve further into the concept of aphasia, we will discuss Broca's aphasia (expressive) and global aphasia. Expressive aphasia (non-fluent aphasia) was described by Paul Broca during the nineteenth century. Broca's patient exhibited symptoms such as strenuous speech, lack of comprehension, affected morphology and unstable prosody, among others. It is a disorder that affects the production of words, phrases and speech delivery, as a whole. There are similarities while exploring global aphasia because it also deals with both written and spoken language apropos of speech deficiencies. The inclusion of repetitive and insensible structures, limited formulaic utterances and neologism is an independent characteristic in the exploration of aphasic speech [2]. Amidst their indistinguishable nature, it is important to survey the disparities between global aphasia and Broca's aphasia. They both struggle with comprehension difficulties but the former, in comparison to the latter, is well versed with these skills of comprehension [6]. Deficiency of formulaic utterances in Broca's aphasic speech interferes with the ability to achieve proper and substantial communication. Seeing as repetitive utterances were more prevalent in Broca's aphasia, linguists and researchers have proved their recent existence in global aphasia. The relationship between lyrics and formulaic language is evident while probing the scope of aphasic speech. The former, despite their ordinary musical exhibition, can also be spoken in a rhythmical manner. These lyrics are often stored and secured in the brain's long-term memory [6]. For this reason, studies have affirmed the hypothesis apropos of fluent singing and aphasic patients. When there is an in-depth examination, individuals conclude that the existence of long-term memory is, in fact, the determinant of speech acquisition. There should be a distinction between these lyrical forms and long-term memory in rectifying aphasic speech [8].

3. Role of formulaic language in aphasic speech formulation

Another study discusses the role of formulaic language not only to persons facing linguistic problems but also to people who may encounter settings where the language is needed. The first role is the ability to retrieve significant expressive chunks from the long-term memory and consequently slot the phrases, ideas and expressions. Through the constant retrieval of linguistic items and components, the speaker is in a position to build a coherent structure of communication and hence facilitate the conveyance of information and language between speakers. Corpus linguistics observes that formulaic language has a certain complexity, which makes it limited than the conventional form of communication [3].

Another role of formulaic is the ability to smoothen understanding as a result of reduced cognitive burden [1]. Scholarly literature establishes that closely knit lexical items and the use of familiar and culturally embedded phrases ease understanding. For persons experiencing the aphasic condition, formulaic language minimises the complexity of the conveyed message, and it is not a surprise that conventional forms of language like apologies, making excuses, requests and greetings rely fundamentally on formulaic expressions [9]. Scholars like Wood agree that 'there is a strong facilitative role of formulaic units in language fluency which enables aphasic patients to run communication amid the constraints of attention and time found in real-life communication' [10].

4. The acquisition of formulaic language to build aphasic speech

Scholarly sources discuss the acquisition of formulaic language and the ability to apply it as an aphasic-oriented language. A major premise of the formulaic expression is to draw knowledge from long-term memory and in the process achieve a streamlined communication model. Sources note that aphasic patients struggle with communication challenges, which affect their social and professional lives due to lack of formal and informal integration with the society [4]. Acquisition of key formulaic expressions is tantamount in building constructive relationships and in the process enhancing the quality of life through aphasic speech. The primary ways of building a block of formulaic language are through interactional goals and inclination to social domain [11].

The literature further establishes that in L2 learners, formulaic expressions relied mainly on the ability to be communicative although in a limited way. The capacity to apply a set of lexical terms enables L2 speakers to integrate into peer groups as a result leading to a higher language input. Researchers conducted a study in a group of Mexican students targeting the evaluation of discourse expressions. In relation to the acquisition of formulaic language, they established the following:

- Giving an expression that you speak a certain language with a well-chosen set of words.
- Identify expressions familiar with you and begin communicating.
- Looking for repetitive and recurring phases of speech you are familiar.

Similarly, the strategies mentioned above, although primarily applicable to L2 learners, may be employed in building a solid block of aphasic speech. Formulaic expressions used by native adults can appear during the language acquisition and production of young children and L2 learners. These expressions may be native-like or idiosyncratic. In the case of people with aphasia, we can experience the same phenomenon [9, 12].

The acquisition of well-known phrases can further be established by paying attention to facial expressions, body movement and non-verbal cues [13]. This means building an aphasic speech formed primarily from formulaic expressions and culturally accepted linguistic items requires the observation of speakers [14]. For older patients, it is important to use formulaic sequences in the facilitation of language formation and application.

The level of social integration by the use of formulaic expressions is identified to rely on the need to be communicative, and hence proper acquisition demands an equal need to be expressive. Above implies that building a functional and applicable block of aphasic speech different from the natural language but compatible with both the speaker and the hearer demand a high level of integration. Persons facing aphasic conditions or linguistic challenges may enhance acquisition by interacting and engaging with members of the society. Building constructive relationships that address communication gaps, appreciate idioms and support non-verbal expressions is paramount in aphasic speech formulation [7]. To rectify these speech difficulties brought about by aphasia, reiterate the necessity of speech management techniques. It supports the grasping of formulaic utterances so as to eradicate any deficiencies of speech. Their research informs individuals about the role of formulaic speech in improving one's speech production and delivery [15].

5. Mastery of formulaic expression and aphasic speech

The mastery of formulaic expressions is further examined by scholarly literature to establish the link between comprehensive input and overall acquisition. Scheffler is the one author who implies that the acquisition of an aphasic speech borrowed from formulaic expressions cannot be developed purely from a class set up. The learning environment fails to encompass a broad range of elements, which form the formulaic language like positions in utterances, meanings, grammatical patterns and collocates. Another scholarly observation is that conscious noticing is central in the acquisition and application of formulaic language. Significant learning comes from consciously tracking, identifying and applying the concepts, ideas and patterns of thought [11].

The development of a block of language to meet aphasic needs relies solely on conscious listening and comprehensible input by the hearer. Poor performance in the utilisation of a broad range of formulas comes as a result of poor understanding of language forms, which consequently affects the correct interpretation and application. The above means that viewing formulaic language from the context of language comprehension is significant in the overall acquisition. Further, there are links that a good knowledge of a language, grammar and similar formulations is crucial in advancing the understanding of facial cues, ideas and general patterns of thoughts to meet aphasic speech [3].

6. Underlying characteristics of formulaic language

Literature gives a critical overview of formulaic language noting that it is a system of pre-fabricated unit languages and phrases creatively knit together. The linguistic units making up the formulaic structure can holistically be retrieved by the person talking or speaker and understood by the hearer. A major feature of this particular language is the arbitrary nature, which means there is no particular expression preferable among other systematic expressions to fulfil a specific communication function [16]. The language borrows from commonly

understandable and expressive idioms, phrases and proverbs to fulfil a range of communication objectives. These various conceptual links and items encompassed in the formulaic language include ideas, lexical items, notions and expressions that contribute to the formation of a purely independent form of language. Hence, formulaic language, unlike the normal structure of natural language (also called novel communication), is seen as a set of units, expressions and idioms holistically retrieved by the speaker and understandable to the hearer [10].

Another literature identifies the defining features of the formulaic language and what makes the expression different from novel communication. The features include stereotyped form, used in specific conditions, known status and conventional meaning [3]. First and foremost, formulaic expressions are stereotyped as they are an abstract creation and formulation by a community of persons with similar challenges. For example, in nursing homes or care centres, formulaic language is formed through a combination of commonly known and well-acceptable cultural norms. Other than being a stereotype language, formulaic expressions apply to specific conditions in the attainment of defined communicative purposes. Moreover, formulaic language features a known status in that it is easily identifiable and well known. Still in the 'widely known' aspect, what facilitates the familiarisation of aphasic speech (borrowed from the formula) is the fact that the brain is conditioned to store information in the long-term memory. This means that brain damage affects the lower faculties but still allow the brain to preserve a significant content for information conveyance. Finally, conventional meaning refers to the general way of life in a typical society meaning that formulaic expressions allude to ideas, practices and activities understandable by many [10].

Research on the pragmatics of formulaic language shows that unlike novel sentences that are independent of context formulaic expressions are sensitive to social conditions like discourse styles, formality index, social register and the structure of communication [4]. The idea that further makes formulaic utterances special is the narrowed outlook on topic, speaker and the overall purpose of communication. For example, novel ideas like 'The cats rest on the sofa' and 'Travelling across Europe costs time and money' [9] are not closely tied to contextual particulars. Also, a greeting like 'Good Morning' is said at a specific time before noon. Formulaic expressions are, therefore, more narrowed with a specified application that suits social conditions. Given the growing research on formulaic language in tailoring clinical solutions for aphasic victims, the social dimension of formulaic expressions is a key feature. This review agrees with scientific literature that building an input-and-output cycle to support communication throughout the continuum of life will demand a good understanding of the defining features. More clearly, building an inclusive framework of policies for the application of formulaic treatment for aphasic patients demands a good knowledge of the thematic underlying of formulaic articulations [17].

It is important to note that a major significance of formulas is to expand the speaker's choice of words when the brain is under pressure. The human memory has an impact on performance (using language in speech) as it controls the major faculties including information processing and retrieval. Hence, as much as formulas play a critical role in communication, the memory cannot be ignored as it sends impulses and signals to ease interactions [4].

7. Dual model of processing language: towards a formulaic communication

Another literature evaluates the dual process model for processing language. Novel and formulaic expressions, although they occur in different principles, manage to stand out during spontaneous communications. More clearly, these two are disconnected at the cerebral. Each of the two can be selectively impaired and preserved from mental conditions like *aphasia*, *schizophrenia*, *Parkinson's disease* and *dementia*. Research continues to point out neurological results on the existence of a dual mode of operation: novel and formulaic forms [3]. During mental stress and severe accidents, one assumes over the other—meaning that mental impairment does not purely render the victim speechless.

The dual process model of processing language supports communication regardless of the nature of the damage and hence allowing for the continuity of social life for victims. Further studies where underlying neurological conditions are known suggest that formulaic expressions are formed at a hemisphere-subcortical section that regulates the design of formulaic expressions. Another study postulates that the knowledge of formulas is disconnected, meaning that there is a gap between natural knowledge and the context of formulaic expressions. For L2 aphasic victims, one may possess a higher knowledge but remain unable to make an accurate interpretation of formulaic expressions [3].

8. The settings for the establishment of formulaic language and aphasic speech

Studies dealing with the teaching of formulaic language suggest that existing literature and academic works have not developed a recognisable formulaic discourse. There are gaps in knowledge between what is needed to build a functional and effective aphasic speech and what is offered in teaching formulaic language through clinical and psychosocial interventions. One word phrases and comprehensible formulas provide a basis for aphasic speech—meaning those facing mental pressures can tap into a single pool of formulaic expressions. Research on formulaic language holds the promise of casting light into a broad range of knowledge on the underlying principles of the discourse. Disparate modes of language are further instrumental in the creation of a solid framework for the aphasic speech [15].

The social setting, the surrounding and the immediate neighbourhood are equally instrumental in nurturing formulaic discourses. Sources establish that patients remaining in a stagnant position for a relatively longer time usually learn by means of observation. While there is evidence that constant learning occurs by observing the surrounding, drawing from the social learning theory, it is important to note that aphasic speech can be attained by mere interaction [10]. This review, therefore, agrees that formulaic expressions are a product of social settings and a replica of real-life events that illicit communication and conveyances throughout. Previous knowledge before mental attacks like aphasia is equally instrumental in the production of speech. This knowledge refers to the general understanding of life

through lived experiences by the patient, knowledge that offers the person awareness of the social surroundings, acceptable cues and the ability to interpret subtle cues to understand and to communicate. Personal understanding is a key requisite in building a foundation for formulaic expressions. Indeed, combined with the social setting, institutions are in a position to design interventions consistent with the needs of patients. Acquisition of formulaic utterances is essential in the clinical sciences because therapists utilise them as building blocks for dealing with aphasic difficulties accrued from preservation [3].

9. Preservation of formulaic language

There are formulaic expressions that are preserved in aphasic speech. According to Van Lancker Sidtis and Yang, production of fluent speech often occurs as a result of distortions or strokes in one's left hemisphere [18]. In addition to mundane expressions, such as greetings, swear words and interjectory words (which are part of routine speech) are preserved while tackling aphasic speech [3]. Van Lancker Sidtis's study also reiterates the relevance of nouns in showing these preservative ideas affiliated with formulaic language. There is a close focus on proper nouns and their role in assisting therapists to create the building block of rectifying these symptoms of aphasic speech [3]. Newly acquired speech is often distorted when there is an interference with one's brain. Therefore, there are close chances of aphasic individuals being forced to deal with over-acquisition of utterances and speech, as a whole. These newly learned words, according to Van Lancker Sidtis, differ in each individual. They are among the formulaic expressions that are preserved in attempting to realise a building for therapists to eradicate the symptoms of aphasia. Despite the pattern in some formulaic expressions, it is necessary to understand these aphasic preservations are not constant. Therefore, Van Lancker Sidtis, in her research, posits the unavailability of practical (or theoretical explanations) for the loss or preservation of formulaic language in various forms of aphasia [3]. Everyday language is detailed articulately under the bracket of formulaic language preservation. Therapists dealing with speech difficulties in both adults and children require these formulaic expressions as a building block for dealing with aphasic complications. Unlike swear words (or curse words), greetings, mundane words and routine language, most of the utterances by human beings are lost. Van Lancker Sidtis's study affirms that brain damage, which causes speech and language difficulties, accentuates the preservation of formulaic language in aphasic patients [3].

10. Research and study implications

Formulaic language and aphasic speech review draw cross-cutting concepts drawn from psychology, sociology, medicine and ethics. The use of a structured language with idioms, proverbs, lexis and sayings stands as an important area in facilitating communication functions. Rising rates of diseases like *Alzheimer*, *AD*, *Parkinson's* and *Aphasia* pose a significant risk to populations, particularly the older groups. Nursing homes, care facilities and elderly centres are settings established to facilitate the care, therapy and overall well-being of patients

and victims. Research on formulaic language shows the significance as establishing a set of concepts and principles that will build a solid body of research. The principles will further contribute to a contextual framework to guide the behaviour of clinicians, caregivers and practitioners. Formulaic research is further fundamental in care centres that handle clients with a diverse range of aphasia conditions from anomic to the transcortical types [3].

Finally, the growing body of linguistic literature on formulaic language helps to support social cohesion by making aphasia patients part of the equation. Language impairment lowers the quality of life particularly when victims are segregated from the mainstream society. Patients suffer from insecurity, lowered self-esteem, emotional and psychological disconnect. The brain damage affecting language processing continues to impair the actions of victims, and hence taints their interaction and association with others. For example, aphasia relates to slurred speech, limited choice of words and failure in literacy skills including reading and writing. Building knowledge through research often in the form of scholarly literature leads to the realisation of inter-related principles to guide decision-making on recognisable formulaic expressions.

In discussing the formulaic language and its relationship with aphasic speech, there is need to delve into native languages and its speakers [5]. Through such an approach, the linguists manage to probe into the scope of both native and non-native speakers, deciphering their competence in formulaic expressions. There should be a controlling nature while dealing with multiple words and units in native languages and speech [4]. Whether in writing or verbal utterances, they should be monitored especially due to their affiliation with nativity. The availability of utterances like these is a non-issue without the incorporation of broken down meanings of notions that can be understood by natives. From the perspective of Van Lancker Sidtis, individuals learning second languages often experience difficulties while grasping formulaic expressions. Dealing with understanding both the second language and formulaic expressions at the same time proves challenging to the non-native speakers [19].

Undoubtedly, delving into lexical content should be explored so as to understand the importance of pragmatics while dealing with language comprehension. From an aphasic point of view, since formulaic language is detailed in its effectiveness in academia, linguists reiterate its relevance in improving comprehension of both written and spoken ideologies [11]. Affiliation with formulaic expressions in another language also improves the ability to express oneself despite the speech difficulties accrued from aphasia. To avoid poor judgements associated with inadequacies in writing as a building block of aphasia, formulaic utterances and expressions ensure that language is comprehended, accordingly. There is the possibility of attracting falsified conclusions when there is no incorporation of formulaic language and sequences. Since linguists and other researchers have focused on language that is not fluent. It is not only speech complications, such as aphasia that interfere with fluency, but it is also affected by impromptu interruptions or interferences. From the linguist point of view, both speakers and listeners have a role to play in the issue of disfluent speech. Inaccurate pronunciation of words, in addition to the interruptions and hesitant delivery of words, exhibits a handful nature while dealing with comprehension capacities [17].

Without a doubt, it is impossible to produce and acquire language without utilisation of formulaic language [17]. Their storage in the long-term memory and large quantities reiterates

the necessity of multi-wordiness in comprehension skills. These utterances are present in both children and adults because of their susceptibility to aphasic speech. Written and spoken speech is moulded from childhood, and therefore, there is a great relationship between childhood and adulthood experiences apropos of speech deficiencies [6]. Acquired from in-depth research, it is evident that formulaic expressions and language have taken up an important place apropos of research in linguistics [4]. Both first and second language learners are keen to delve into a formulaic language as a way of improving their speech. They are essential for language fluency because they do not focus on the content of one's short-term memory. Educators and teachers are specifically affiliated with the use of formulaic expressions in an attempt to improve (both first and second) language acquisition [5]. Their demarcated parts that are inclusive of proverbs, idioms and expletives are relevant in sharpening the language skills of both aphasic and non-aphasic individuals [4].

Evaluating the patterns of formulaic language and the impairments to discourses will provide insight into cognitive science and clinical practice. Most importantly for the above scholarly contribution is the ability to enhance social integration while supporting the victims of aphasia. Speech is integral in daily life as it defines relationship and cuts across cultures. Mental and brain conditions impair speech functions, derail communication gradually leading to frustrations and discomforts from speakers. In severe cases, the conveyance of information is cut short and performances inhibited. Research on formulaic language with particular emphasis on aphasic speech provides insight on best practices. Most importantly is the need to design a recognisable and respected set of formula that cuts across age and gender—and supports communication. The literature discussed above offers overarching information on formulaic language and aphasic speech. The scholarly literature is evaluated based on themes like the features, characterisation, acquisition and utilisation of formulaic expressions. The review further examines the scope of aphasia including types and manifestations. The literature review surmises that a standard set of language is crucial in the fulfilment of aphasia, meaning that universal formulas will add insight on fields in cognitive science and clinical care.

11. Conclusions

The discussion is comprehensive and addresses the demarcated parts of formulaic language as a building block in aphasic speech. Apart from understanding its scope, there is enlightenment on the role of formulaic language in improving one's speech through therapy. Without proper evaluation of one's speech difficulty, it is impossible to conclude the necessity of these formulaic utterances in assisting therapists to realise the preserved and non-preserved words. Most of the preserved words, according to formulaic language, are mundane and used on a daily basis. The ability or inability of aphasic patients to comprehend these words makes it easier for therapists to utilise them as avenues for rectifying these speech problems. The role of formulaic language should be explained thoroughly so as to pay close attention to its effects on aphasic speech. In lyrical and musical forms, also there is better production of words in aphasic individuals because of proper use of one's long-term memory. The research and implications of this study delve into other disorders such as Alzheimer and Parkinson's,

which, like aphasia, affects one's communicative abilities. Despite its numerous roles, however, formulaic language has ascertained its plausibility in speech therapy as well as the recovery process, further research is necessary to understand the functioning of these stereotyped formulas in the different types of aphasia.

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