WORD FORMATION PROCESSES IN TRADE NAMING: A COMPARATIVE STUDY OF NATIONAL AND MULTINATIONAL PHARMACEUTICAL COMPANIES IN PAKISTAN

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Candidate of **Master of Philosophy** at the National University of Modern Languages do hereby declare that the thesis **Word Formation Processes in Trade Naming: A Comparative Study of National and Multinational Pharmaceutical Companies in Pakistan** submitted by me in partial fulfillment of MPhil degree, is my original work, and has not been submitted or published earlier. I also solemnly declare that it shall not, in future, be submitted by me for obtaining any other degree from this or any other university or institution.

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ABSTRACT

Title: Word Formation Processes in Trade Naming: A Comparative Study of National and Multinational Pharmaceutical Companies in Pakistan

Pharmaceutical trade naming has been widely studied from branding and marketing perspectives, but the systematic exploration of word formation processes remains largely overlooked. This study examined the word formation processes in pharmaceutical trade names at both national and multinational levels in Pakistan. The primary objective was to explore the word formation processes in the trade naming of pharmaceuticals, with a focus on understanding the specific linguistic processes they utilize. For this purpose, the researcher used a diverse sampling technique. Firstly, three national and three multinational companies were selected through convenience sampling. Secondly, the specific categories were selected through purposive sampling, and lastly five drug names were chosen from each category through simple random sampling. The theoretical framework consisted of word formation processes, such as coinage, blending, clipping, acronyms, reduplication, compounding, borrowing and derivation. The comparison between national and multinational pharmaceutical levels revealed a wider variety of word formation processes such as coinage, blending, clipping, initialism, graphological deviation, anagramming, derivation, and compounding at the national level, while at the multinational level, coinage and blending were the dominant processes but other processes were not used abundantly. The absence of borrowing and reduplication across both levels was a significant finding, as was the prevalent use of blending by national companies and coinage by multinationals. Interviews conducted with industry professionals further underscored the lack of awareness among pharmaceutical companies about the specific linguistic processes, often resulting in randomly generated names. The study also uncovered some unusual word formation processes that, while not traditionally recognized in linguistics, prove to be workable and could be incorporated into linguistic theory to aid in the development of new trade names.

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LIST OF ABBREVIATIONS

AIDS:	Acquired Immune Deficiency Syndrome
CD:	Compact Disc
CIDA:	Canadian International Development Agency
DRAP:	Drug Regulatory Authority of Pakistan
EMA:	European Medicines Agency
FDA:	Food and Drug Administration
GSK:	GlaxoSmithKline
LASER:	Light Amplification by Stimulated Emission of Radiation
NASA:	National Aeronautics and Space Administration
NATO:	North Atlantic Treaty Organization
OTC:	Over-the-Counter
PEI:	Prince Edward Island
PPI:	Proton Pump Inhibitor
ROM:	Read-Only Memory
UNICEF:	United Nations International Children’s Emergency Fund
USAN:	United States Adopted Names
USB:	Universal Serial Bus
WFPs:	Word Formation Processes
WHO:	World Health Organization

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DEDICATION

This thesis is dedicated to my mother, for her unconditional love, endless support, and encouragement. Nothing was possible without her support.

CHAPTER 1

INTROUCTION

1.1. Overview

Over centuries, trading has been used as a tool to distinguish the products of one producer from those of other competitors in the market. Trading denotes a particular name, term, icon, pattern or a blend of all, to distinguish the goods or services of one seller and setting them apart from competitors. Arguably, the most important element of trading is the development of the trade names of the products. Humans have a longstanding tendency to anthropomorphize the objects they possess and use. Naming something is a universal phenomenon. It is not merely limited to human beings but inanimate objects also have names for the purpose of identification. Apart from this, giving something an identity through name is ultimately a way of exerting control over it. This is the reason names are given to all sort of things. The study of naming is called Onomastics. The current study focuses on examining trade name formation in the context of Pakistani national and multinational pharmaceutical companies through the processes of word formation.

The processes whereby new words emerge in a language like English are called word formation processes. Word formation is a branch of science of language which studies the patterns by which a language forms new lexical unit i.e. words. Word formation is one of the concerns in the field of morphology that discusses the ways by which new words are created. Bauer (1983) and Quirk et al. (1985) put word-formation process into two main groups. The first one includes affixation, compounding, and conversion, but the second one includes clipping, blending, and acronyms. Plag (2003) describes word-formation as the study of the ways in which new complex words are built on the basis of other words or morphemes. According to him, word- formation consists of two kinds of processes: they are derivation and compounding. Furthermore, he divides derivation into two subcategories, such as affixation, which includes: prefixation, suffixation, and infixation; and non-affixation which includes: conversion, truncation and blending. In addition, Brinton and Brinton (2010) classify the word formation processes into eight types i.e. derivation, compounding, back formations, conversion or functional shift, blends, shortening, reduplication, and root creations.

According to Yule (2010), word-formation is the study of processes used to create new words. According to him, there are ten word-formation processes i.e. compounding, coinage, borrowing, blending, clipping, back-formation, conversion, acronyms, derivation, and multiple processes. According to Hatch and Brown (1996), Katamba (1993), O'Grady (1996), and Yule (2010), there are several word formation processes that may occur in the formation of new words.

Taking into consideration all the word formation processes proposed over time by various linguists, Yule (2010) compiles a list of WFPs including ten processes. Subsequently, O'Grady and Archibald (2016) refine and modify the previously proposed word formation processes. They formulate a comprehensive list comprising several word formation processes including coinage, clipping, borrowing, compounding, cliticization, blending, reduplication, back formation, acronym, suppletion, inflection, derivation, conversion, internal change, and onomatopoeia. This compilation not only synthesizes the insights of linguistic pioneers but also enhances and refines the understanding of word formation processes.

Word formation processes play a pivotal role in trade, commerce, and business, facilitating clear and concise communication, effective branding, and product differentiation. By crafting distinct terms, business can develop unique brand identities which help to minimize confusions among consumers facilitating brand recognition. In this way, the word formation processes help to describe new products aiding in marketing and advertising endeavors. Furthermore, word formation plays an instrumental role in innovation by offering versatile ways to describe the emerging technologies thereby fostering growth and enhancement in the industries. For example, the word "Instagram" takes the 1st part of "instant" and 2nd part of "telegram" to make a new word that means a quick way to share messages and photos thus efficiently depicting its functionality with a simple and unique name. Similarly, "Immunotherapy" combines "immuno" (refers to the immune system) and "therapy" indicates treatments that enhance the individual's immunity to combat the diseases, thus helping patients instantly grasp the meaning and use of this word. Both of the newly generated terms have come into being through the process of blending. Likewise, "BlackBerry" also applies compounding by combining two words "black" and "berry" to make a new word that coveys a distinct concept. Another example is "USB" that is formulated through initialism and stands for Universal Serial Bus. In the field of information technology,

the term “app” is a clipped form of “application” that refers to a software designed for mobile phones or computers. So, all word formation processes play a crucial role in businesses and trading to make new words that represent innovative technologies.

Although Pakistan is a developing country, yet its pharmaceutical sector has continued to expand at a steady pace. The pharmaceutical sector of Pakistan is regulated by the DRAP (Drug Regulatory Authority of Pakistan) that is responsible for the approval of drug composition, naming, clinical trials, as well as post-marketing outcomes. To create the identity of the drug, the companies must establish the trade name of a drug. Although DRAP has guidelines addressing several phases of drug discovery and development, yet it does not provide a particular systematic approach or a standardized process for the trade naming of the pharmaceutical products. The focus of DRAP is to prevent misleading or confusing drug names that may cause problems for healthcare professionals, patients, and public. Besides this, DRAP strictly instructs pharmaceutical industries that trade names of pharmaceutical drugs must not match any other already existing drug names. Chanda (2017) suggests that these names serve to uniquely differentiate between certain beings or objects. Many pharmaceutical manufacturers spend considerable resources in selecting and developing the ideal trade name for their products (Russell, 2007).

As trade names are considered as identity markers of the pharmaceutical products, they play an important role in their acceptance or rejection by the concerned regulatory authority. It sometimes takes more time to decide on a particular word for a new product than on any other aspects of its development. In this process, the name undergoes multiple attempts because it demands creativity (Crystal, 2003). As a side effect of the rapid progress in medical research and the emergence of new products, medicine is a domain where new products have to be named more frequently than in many other domains. In pharmaceutical research, word formation is particularly important because there is a steady growth in the number of drugs that need to be named. The current research solely focused on the trade or commercial names of pharmaceutical drugs in Pakistan.

In Pakistan, pharmaceutical companies are divided into two broad categories:

1. National Pharmaceutical Companies
2. Multinational Pharmaceutical Companies

A national pharmaceutical company operates within a single country i.e. making and selling drugs at local or national level while multinational company generally has offices or factories in different countries and a centralized head office where they coordinate global management. Both national and multinational companies study the diseases, causes and treatments, and then invent new pharmaceutical drugs for the major and minor ailments. So, drug discovery and naming are major concerns for them.

The current study aimed to trace out the word formation processes in the trade naming of the national and the multinational pharmaceutical drugs in Pakistan. It was very important to decipher whether pharmaceutical industries had developed their own naming framework or if they were still struggling with the unavailability of a standardized approach. Therefore, it became essential to examine the word formation processes in trade naming within the pharmaceutical sector in order to fully grasp the word formation processes behind their naming.

1.2. Background to the Study

Every drug consists of three names:

1. **Chemical Name**
2. **Generic Name/ International Non-proprietary Name**
3. **Trade name/ Brand name/ Proprietary Name**

The name which reflects the chemical composition of drugs is called chemical name. Chemical names are systematic names given to a drug based on its chemical structure. They are often complex and not easily remembered or pronounced. An example of a chemical name is “2-(4-isobutylphenyl) propanoic acid” for the anti-inflammatory drug Ibuprofen.

Generic name is also called non-propriety name. This name is unique and globally recognized name assigned to pharmaceutical substance. These names are intended to be used worldwide. They do not imply any therapeutic or pharmacological property and are not associated with any specific manufacturer or product.

Lastly, trade names are also called brand names, commercial names or proprietary names given to a pharmaceutical product by its manufacturer. These names are usually based on their memorability, distinctiveness, and marketing appeal. Examples of trade

names include “Lipitor” for the cholesterol-lowering drug Atorvastatin, and “Viagra” for the drug Sildenafil.

In healthcare industry, trade naming is very essential as it impacts drug identification, the accuracy of prescriptions, and safety of patients. Across the globe, the regulatory bodies such as World Health Organization (WHO), U.S. Food and Drug Administration (FDA), Drug Regulatory Authority of Pakistan (DRAP), and the European Medicines Agency (EMA) have established guidelines to ensure that drug names are distinct, unique, and not likely to create any confusion. Yet, despite these instructions, medication errors still arise due to look-alike or sound-alike names. A number of precedent research studies have dedicated their efforts to explore particular patterns in the trade naming of pharmaceutical drugs in order to provide insights into trade naming practices ultimately mitigating the risk of medication errors stemming from the names that are either confusing or sound too similar to one another. In this regard, Ogwuche et al. (1993) observed that Nigerian medical practitioners primarily prescribe drugs using generic names rather than trade names. Despite this, while purchasing drugs people frequently opt for trade names causing a detrimental discrepancy between physician and patient. This excessive dependence on trade names drove doctors to include the trade names of medications in their prescriptions, thus highlighting the importance of trade names for ensuring effective communication and client safety.

According to Gangwal and Gangwal (2011), it has been estimated that 7,000 to 20,000 individuals in the United States suffer fatalities annually due to confusion stemming from drug trade names. Delia et al. (2018) conducted a linguistic analysis of selected antibiotics and concluded that similarity in trade names of drugs, whether brand or generic may result in prescription errors, which could worsen patient conditions. Dutchen (2009) claimed that pharmaceutical industries spend from $250,000 to $2.5 million to develop trade names for their drugs. According to Karvonen (2020), the creation of pharmaceutical trade names is a meticulous, time consuming, and a very expensive procedure. The estimated cost of forming a new trade name which may exceed up to 2.25 million dollars, and the process can span several years.

The above debate emphasizes the significance of trade naming practices in the pharmaceutical sector that necessitates the need to explore the word formation

processes in the trade naming of pharmaceutical drugs. Despite the global efforts, gaps and inconsistencies in trade naming practices still persist posing risks to the medical professionals as well as patients. So, a systematic approach for drug naming can be a tremendous asset to craft non-confusing trade names for drugs.

It is also noticeable here that the existing research studies on pharmaceutical trade naming are from other countries, while no research studies have been conducted in the Pakistani context that makes it crucial to explore naming practices in Pakistan using word formation processes.

1.3. Statement of the Problem

Since rapid progress has been taking place in the pharmaceutical sector of Pakistan, the task of naming a new drug becomes more crucial and simultaneously challenging due to the non-availability of the systematic approach for trade naming. The pharmaceutical companies name their drugs just for the sake of making their trade names unique and different from already existing names, and hence they sometimes fail to do it, and ultimately come up with the names which look alike or sound alike to the already existing pharmaceutical trade names. Such trade names of drugs cause plenty of confusions and problems for the medical and para-medical staff, pharmacists and patients too. Consequently, if the names are not changed, the regulatory authorities responsible for approving drug names may reject a drug. Furthermore, it is due to the fact that pharmaceutical companies usually do not have the required linguistic knowledge which word formation demands to name a drug. Therefore, the study aims to examine how names were formed within the Pakistani national and multinational pharmaceutical companies to trace out the implied linguistic techniques and make them understand the linguistically defined word formation processes. Besides this, the need for this study is especially important because no studies on pharmaceutical trade naming have been conducted in the context of Pakistan.

1.4. Rationale of the Study

The pharmaceutical industry of Pakistan is vast, encompassing the entire process from drug production to distribution, traversing through multiple stages. One crucial phase in this journey is the development of the drug's identity, which includes its chemical, generic, and trade names. However, the stage of developing the trade/brand

name poses significant challenges and is critical for companies, particularly due to the absence of specific mechanisms provided by regulatory authorities such as the DRAP (Drug Regulatory Authority of Pakistan) in Pakistan. Instead, companies are given general guidelines, such as ensuring the name sounds unique and distinct, differs in writing, and does not closely resemble any other brand. Fulfilling these conditions often proves troublesome for companies, consuming considerable time, and effort during the process.

In this era, there is an insatiable demand for medicines like never before. They are not just commodities: they are indispensable necessities. In such a landscape, dissecting the linguistic aspects of pharmaceutical trade names is indispensable for promoting clarity, accuracy, and effectiveness in conveying vital information about medications to healthcare professionals, patients, and the general public. The linguistic analysis of the trade names i.e. examination of word formation processes has emerged as area of focus in the current study.

1.5. Research Objectives

1. To trace out the word formation processes which are used in the trade naming of pharmaceutical drugs in Pakistan
2. To make a comparison between national and multinational pharmaceutical companies on the basis of word formation processes used by them in the trade naming of pharmaceutical drugs
3. To investigate the perspectives of national and multinational pharmaceutical companies of Pakistan regarding the use of English word formation processes in the trade naming of pharmaceutical drugs

1.6. Research Questions

1. What word formation processes are involved in the trade naming of pharmaceutical drugs in Pakistan?
2. How does the trade naming of national pharmaceutical drugs differ from that of multinational pharmaceutical companies?
3. What are the perspectives of national and multinational pharmaceutical companies in Pakistan regarding the word formation processes in the trade naming of pharmaceutical drugs?

1.7. Significance of the Study

This research is a great contribution in the field of health and linguistics as it makes the pharmacists understand the linguistically established processes of word formation. Furthermore, it may be expected to make them bring into use a systematic way of trade naming through word formation processes. Moreover, it provides extensive knowledge and information to make them familiarized with the new ways of word formation, and hence to make their drugs' names more unique, distinctive and euphonic. A well-crafted name can help create brand recognition for a drug, making it easier for doctors, pharmacists, and patients to identify and remember it. Developing drug names that are effective and compliant can increase the chances of regulatory approval and market success, leading to increased market share and revenue.

Furthermore, this research may be useful to overcome the problems i.e. mixing-up the drugs that are caused by look-alike and sound-alike drugs' names. This study can be a useful reference for other researchers to do research in the other aspects i.e. the study of naming of other categories of drugs. Apart from this, the research can hopefully be useful for people who study linguistics, take interest in the study of word formation processes in order to increase their knowledge of morphology. English linguistics students interested in pursuing careers in the healthcare industry, such as medical writing, technical writing, and translation, can take benefit from studying pharmaceutical drug naming.

1.8. Delimitation

Although pharmaceutical drugs are categorized as chemical, generic, and trade names, yet the current study is delimited to focus on trade names only. There are many pharmaceutical companies in Pakistan and all over the world, but this study has been confined to the three national pharmaceutical companies such as Metro, Warrick, and Pearl, and three multinational pharmaceutical companies such as Pfizer, Getz, and GSK (GlaxoSmithKline), located in Pakistan. Apart from this, there are various categories of drugs. The study has been delimited to the trade naming of the five most commonly used categories of pharmaceutical drugs which are antibiotics, analgesics, antihistamines, gastrointestinal, and cardiovascular medications. Furthermore, the researcher confined this study to the five selected drug names for analysis from each selected category of drugs through simple random sampling. This study is delimited to

the data collection period from September 2023 to February 2024. Additionally, the researcher delimited the study to the word formation processes proposed by O'Grady and Archibald (2016).

1.9. Organization and Structure of the Thesis

In order to present this study systematically, the researcher categorizes it into five chapters.

Chapter 1: The first chapter included the introduction & background of the study, research objectives, research questions and significance of the study. The rationale of the research, delimitations and finally structure of the study has also been discussed.

Chapter 2: It dealt with the review of the theories and published data that was relevant to the present study. It thus delineated the gap that sparked the interest of the researcher to conduct this study.

Chapter 3: The methodological aspects for data analysis, type of research, research method, research design, theoretical framework, data collection (sources, population & sample) and data analysis procedures were discussed in this chapter.

Chapter 4: This chapter presented the analysis and discussion of the data analysis based on the theoretical framework presented in third chapter.

Chapter 5: This chapter presented the major findings of the analyzed data and proposed some recommendations for the future researchers.

1.10. Chapter Summary

This inaugural chapter of this thesis provided the foundation for this research study. It opened with a brief introduction of the study. Furthermore, it also introduced the background to the study, linking it up with the research problem that has sparked the interest in this field; and transitioned to research objectives and questions. It placed major emphasis on elucidating the significance of the study, particularly in the context of word formation processes in the trade naming of both national and multinational pharmaceutical companies. It also described the methodological approach along with the underlying rationale of the study. It ended by defining the limitations of this research study.

CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

This chapter discusses studies conducted in the field of word formation processes. The introduction provides literature on word formation processes, and then it presents studies on the word formation processes used by different companies and organizations in the medical field. Furthermore, it attempts to provide an indigenous perspective of word formation processes with the help of studies conducted in the Pakistani context.

The importance of language in human existence cannot be denied as it plays a crucial role in facilitating effective communication in everyday life. Humans interact using language to convey ideas, thoughts, and emotions to one another. The system of communication encompasses both spoken and written modes of communication. Verbal language, used for communication, is commonly seen as informal since it is less complex than written language. In contrast, written language is seen as more formal, especially in mediums like electronic news, facilitating readers' comprehension of the supplied information. Language serves as a dynamic means for individuals to interact, exchange emotions, and openly express those emotions through spoken and written communication (Yendra, 2018). The nature of language is inherently unstable and constantly evolving within society due to the dynamic interplay between language and human beings. Language is fundamentally a set of sounds that have been assigned significance; this inherent characteristic is what maintains language in a perpetual state of change and expansion. The fluidity of language arises from its capacity to adapt to societal changes, the impact of culture, and the dynamic nature of human interaction. The capacity of language to adapt and develop is a direct consequence of its ability to accommodate shifting demands, expressions, and nuances within a broader social framework (Chaer, 2012).

The process of naming new concepts, things, and occurrences coincides as they are introduced. When compared to other components of the creative process, the process of selecting a particular name for a newly formed product might often need a lengthier amount of focused deliberation than other aspects of the process. This intricate

process entails multiple attempts to assign names, intending to imaginatively express the essence of the item through the depiction of words (Crystal, 2003).

According to Bauer (1983) and Quirk et al. (1985), word-formation processes may be divided into two main categories. Affixation, compounding as well as conversion are in the first category and clipping, blending along with acronyms are in the other category. Plag (2003) explained the word formation in detail, and according to him, it is the study of the processes by which new, complex words are built upon preexisting words. Plag (2003) introduced four categories for the classification of affixation i.e. prefix, infix, suffix and circumfix. Furthermore, the wide-ranging approach of Yule (2010) incorporates several word-formation processes, including derivation, acronyms, compounding, coinage, borrowing, blending, clipping, backformation, conversion, and multiple processes.

2.2. Word Formation Processes

The processes whereby new words emerge in a language like English are called word formation. It is not confined to one language because every language requires words to materialize different stances. Without words there is no development of a language and without development the language would be uninspiring and drab. It sometimes takes more time to decide a particular word for a new product than on any other aspects of its development (Crystal, 2003). Stekauer (2001) suggests Onomasiological theory of word formation that indicates a relationship between word formation and lexical components. Moreover, names are coined either by choosing the word formation components or lexical components which are the part of regular word formation rules, or lexical component. The researcher further propagates various levels of word formation such as onomasiological level, semantic level, phonological level, onomatological level, and conceptual level.

A fundamental work in the area of lexical innovation as well as morphological diversity is Bauer's (1983) and Quirk et al.'s (1985) categorization of word-formation processes into two main categories: affixation, compounding, and conversion, along with clipping, blending, and acronyms. Furthermore, this classification provides a methodical framework for comprehending each of the mechanisms via which new words arise in a linguistic system. One of the most common processes of word formation is affixation, which is the addition of prefixes, suffixes, or infixes to already-

existing words. This process enables the creation of sophisticated lexical units with layered meanings. When multiple words that already exist are put together, a process known as compounding occurs. This results in a new lexical entity that often has unique meaning subtleties not found in components. Analogously, conversion is the process of changing grammatical category of words without appending new terms, which increases the expressive capacity of a linguistics system by means of syntactic reorganization. There are also other methods such as clipping, blending, and acronyms that provide alternative approaches to lexical extension including truncating, fusing, or shortening already-existing lexical fragments. Clipping is the process of shortening a word by leaving off one or more syllables; the result is an informal or colloquial term. Contrarily, blending joins parts of many words to create a unique lexical unit that often reflects linguistic or cultural developments of the present day. Moreover, acronyms are a unique kind of lexical construction in which the first letter of a word or phrase is combined with another letter to create a new word. Although classical classifications of word formation processes are well-established, they have rarely been examined in the context of corporate branding practices within the pharmaceutical industry. This study addresses this gap by identifying and analyzing the specific processes employed in the trade names of national and multinational pharmaceutical drugs in Pakistan.

Plag's (2003) explanation of word-formation is a methodical investigation into the creation of intricate lexical structures that support the dynamic interaction between form and meaning in the ongoing lexical growth of a language. In addition, Brinton and Brinton (2010) classify the word formation processes into eight different types i.e. derivation, compounds, back formations, conversion or functional shift, blends, shortening, reduplication, and root creations. According to Yule (2010), word-formation is the study of processes used to create new words. On the word of him, there are ten word-formation processes including compounding, coinage, borrowing, blending, clipping, back-formation, conversion, acronyms, derivation and multiple processes. According to Hatch and Brown (1995), Katamba (1993), O'Grady (1996), and Yule (2010) there are several word formation processes that may occur in language. Collectively, they all emphasize that word formation is a complex interplay of the several factors that play a major role in the formation of words i.e. meanings of words, phonetic and phonological aspects, morphological aspect, pragmatic aspects of language, considering the practical, social, and cultural aspects of language use, and

historical and sociolinguistic factors. Whereas these works emphasize the linguistic and structural diversity of word formation, the current research investigates how these processes are pragmatically adapted by pharmaceutical companies to fulfill branding, marketing, and identity functions within the Pakistani context.

This foundational overview of word formation mechanisms provides the theoretical grounding for analyzing the morphological strategies employed in pharmaceutical branding, an issue examined empirically in this thesis through both textual analysis and industry perspectives.

2.3. Word Formation Processes in Trade Naming

A Trade name can do more than mere identification. It is formed to develop a labelling system. At the level of practical information, sometimes name has a denotative function, which directs consumers to identify what to purchase. On the connotative level, name generates the image going beyond more than just identifying the function of the product, its composition, characteristics and what it is used for. For instance: Nike, denotatively the name directs the consumers to recognize that the product is a sport equipment. However, connotatively, the trade name often conveys the aura of popularity and advantages of the product quality rather than just the name of the product used. For example, while 'Nike' denotes a brand of sportswear, its connotations evoke notions of athleticism, victory, and cultural prestige, contributing to its brand equity. The field of onomastics, particularly anthroponomastics, has increased awareness involving the multidisciplinary nature of naming. As a result, many linguists such as Emeneau (1976), Maurer (1983), Roff, (2007), Wakumelo (2016), Mwanza and Mkandawire (2016) have written on personal and place names but have paid little attention to drug naming. This highlights the need for more comprehensive linguistic research into commercial trade naming, including drug and product branding, where word formation processes play a crucial role.

In the modern world market place, various businesses aim to excel at almost every aspect and strategy that is required for their business to grow exponentially. It is believed that language plays an important role in marketing and business and a crucial use of language in marketing as well as businesses is naming and branding. In order to explore this phenomenon, Syaputri et al. (2023) adduced that customers are usually more conscious about the identities of brands and they also influence brand loyalty

which in return affects the market placement of businesses and brands. The researcher claimed that in order to stand out from their competitors, companies and businesses use neologisms by adopting various word formation processes. These neologistic strategies employ morphological creativity to construct distinctive lexical items that serve both mnemonic and symbolic functions in brand positioning. Such a methodology enables a business/company to establish its unique identity and make itself easily identifiable by the customers. Additionally, it also creates brand awareness among the consumers.

Furthermore, some businesses use prefixes and suffixes in order to attain consumer satisfaction as they constantly assess the response of customers to the naming of the company. The researcher adds that word formation processes also simplify various aspects related to a company which are difficult to comprehend by customers. (Haryati, 2014). Morphological simplicity through affixation or compounding facilitates easier cognitive processing and recall, thereby enhancing consumer engagement.

2.3.1. The Importance of Word Formation Processes in Trade Naming

Empirical studies across diverse linguistic landscapes contribute to understanding how word formation processes function as strategic tools in brand naming. In order to create memorable and appealing brand identities, word formation processes play a significant role in the creation of trade names. In this particular setting, Indrian (2022) investigated the content of the Google Play Store, with a particular focus on the processes that are involved in the formation of words across the names of mobile applications. Four separate processes were responsible for the naming of four different mobile applications, with each name being impacted by a different method. In addition to two instances of blending, there were two examples of derivation, and there were two possible applications for compounding processes. The procedures for borrowing, coinage, acronyms, and clipping were conspicuously absent. The results demonstrated that in order to increase brand appeal, capitalization stylistics were used into the word-formation of mobile application names.

Analogously, Haryati (2014) examined the importance of product names in advertising, emphasizing their function in differentiating products and the critical element of coming up with unique names ahead of release. The processes of word formation in Indonesian product names for food and beverages were analyzed. The

study employed a descriptive qualitative technique and principles. The researcher classified food and beverage goods in Indonesia into five different word formation strategies—compounding, clipping, borrowing, blending, coinage, and so on—based on the data analysis. By combining components and symbols in accordance with word-formation requirements, the names displayed inventiveness and guaranteed both uniqueness and ease of memory. Choosing the appropriate names required a way to establish a connection between the name and the product, while also taking into account the product's benefits, characteristics, and description. In a separate study, Anggrisia (2020) suggested a list of food products that are suitable with Grab and Go-Jek. The author employed descriptive analysis in conjunction with English morphology. The study examined both Grab and Go-Jek, which are major food delivery applications, as subjects of investigation. It is believed that there are a large number of food companies in the country and these applications encompass most of the companies currently registered with the government. As stated earlier, Grab and Go-Jek are famous companies and after careful investigation it was revealed that these brand names were selected after applying various word formation techniques which usually include, compounding, borrowing, reduplication, acronyms, abbreviations, and clipping. An investigation was conducted to determine the mechanics of word formation in the most popular food brands in Grab and Go-Jek in Malang. The study revealed several phrases that were subject to analysis. The results indicated that restaurant owners employed word formation strategies to create unique names, with the aim of attracting more customers and increasing foot traffic.

2.3.2. Other Applications of Word Formation Processes

It is believed that identification and representation in many situations are impacted by the processes of word formation and because of the brand naming, trade and commerce are dependent on them. In business, lexical derivation strategies are used to develop brand identities and establish a market presence that is iconic. Language systems also make branding and marketing more difficult to do. In addition to other fields, they are significant in military language. These language processes have an effect on the nomenclature and equipment used in the commercial and military sectors. While prior research has acknowledged the crucial role of word formation in branding and identification, this study extends the discussion by examining how these linguistic processes intersect in commercial naming practices, thereby addressing a dimension

often overlooked in existing analyses. Fiano et al. (2017) investigated the use of both non-genericized as well as genericized trade names in the setting of military English, covering both common brand names inside particular military coding systems and military equipment. Through the use of qualitative analysis, the research investigated the lexicosemantic and morphosyntactic word formation processes that are associated with these brand names. The results indicated that it is not possible to infer commonalities among small guns only based on their manufacturers. Therefore, it is necessary to conduct a comprehensive examination of the specifications of each weapon. Formal trademarks, sometimes accompanied by acronyms, conveyed comprehensive data, but informal designations, particularly nicknames, seemed to be impacted by variables outside of language. Although Fiano et al. (2017) provide valuable insight into the morphosyntactic processes in military trade names, their focus remains largely descriptive. The present study seeks to build on this foundation by critically exploring the construction of trade names beyond technical designations. Similarly, Formisano and Grimaldi (2017) explored the linguistic phenomenon of word formation in brand names used in the specific field of maritime equipment for anchoring as well as mooring operations in recreational boating, which falls within the specialist domain of Nautical English. The study employed a technique based on core concepts and practices in corpus linguistics, with a specific focus on trade texts, e-commerce websites, and non-trade specialist publications such as sailing periodicals. The results indicated that trade names in this market sector often did not experience the process of becoming generic, unlike widely recognized brand names. Nevertheless, linguistic diversity and departures from standard usage were noted in non-commercial specialist publications, which might create difficulties for trademark protection.

In the field of fashion, Safira (2022) examined word formation processes used by 25 multinational and local cosmetic companies that are sold on Shopee. The study had two primary goals: first, to categorize and identify the word formation categories in these cosmetic brands; and second, to find trends and implications within the brands. The data gathering required many processes and a qualitative research technique using a descriptive method. Written content from beauty as well as cosmetic blogs provided the researcher with details about local cosmetic companies that she found on Shopee. In order to comprehend the goal of the brand and how it relates to the contents, ingredients, or life of the brand owner, information was also gathered from the official

web pages of cosmetic businesses. According to the researcher, five types of word formation processes were found in the data, encompassing all 25 cosmetic brands: six items for borrowing, six for compounding, four for blending, six for acronyms, and three for multiple processes.

It is believed that the field of fashion is closely related to culinary field and in this context, Fitrisia et al. (2020) examined Aceh Besar's custom of naming traditional food products, investigating the range of names used in cooking and the connotations attached to them. Using a qualitative methodology that combined ethnographic analysis with in-depth interviews and observations, the study followed Spradley's "Gradually Forward Research Flow." The results showed that community conventions, which represent common cultural norms as well as an agreement among people in the community in communication, were responsible for the name of Aceh Besar cuisine products. Fictitious personality, primary components, colour appearance, cooking method, resemblance in appearance, the seasoning, taste, kitchenware, and sound imitation were among the categories of culinary naming processes that were found.

Similarly, in the field of advertisements, Snggraeni (2011) examined the word structures found in Semarang billboard advertising. With an emphasis on linguistic elements, the study sought to characterize the word formation processes in these commercials. The study's theoretical approach, which focused on word formation, was influenced by linguists Hatch & Brown (1995), Katamba (1993), and O'Grady (1996). The study employed qualitative and descriptive methodologies to gather data using methods of documentation using Simak Bebas Libat Cakap (SLBC) for the purpose of analyzing word structures found in billboard advertising in Semarang. The study found 100 slang terms in these advertising, with 40 employing the compounding process, 4 using borrowing, 13 having coinage, 7 applying initialization and acronym, 11 containing blending, 9 having clipping, 9 going through conversion, and 6 employing compounding and 1 having slang. Compounding was found to be the most prevalent word formation process based on the data; it accounted for 40% of all words found in Semarang billboard advertisements.

It is a well-known fact that brands and brand representations dominate ads. Product names are beneficial to the branding of businesses. Giyatmi et al. (2014) investigated the intricate process of developing brand names for Indonesian products

that contain English content. Qualitative methodology was adopted for the study and data was collected from stores owned by Solo, including Hypermart Solo Grand Mall, Gorro Assalam, and Carefur. An investigation on brand names for Indonesian items that contain English elements was done. The investigation focused on the complex process involved in creating these brand identities. The present study's methodology was based on a descriptive approach, which involved the analysis of data obtained from three different supermarkets in Solo, which are Hypermart Solo Grand Mall, Hypermart Gorro Assalam, and Carefur. The data collection period for this study was from February to April 2010. The study concentrated on brand names for Indonesian items that had English components. The researchers examined and categorized the different linguistic processes used in these brand names by carefully applying the rules of English word formation within the field of English morphology. Based on a thorough examination, brand names including English features in Indonesian items were carefully created using various word formation processes. Compounding, Blending, Reduplication, Abbreviation, and Clipping were some of these processes. The compounding procedure was further divided into two categories: modification compounding and pure compounding, each of which has unique features. One common strategy was to blend, which was blending different syllables of the second word with the initial syllable of the first word. Prefixes like pro- and -bio were used along with suffixes like -y, -er, -ness, -ish, and -s throughout the flexible process of affixation. Among the types of reduplication that were exhibited were pure reduplication, reduplication with intensifier meaning, and reduplication with sound change.

Word formation processes in naming practices across various fields such as culinary products, advertising, and commercial branding serve distinct functional purposes. These processes are influenced by conventional community practices, practical communication needs, and the strategic goals of businesses to create memorable and effective brand names. Naming conventions often rely on descriptive attributes such as primary components, appearance, method, and sound imitation, as well as linguistic mechanisms like compounding, borrowing, blending, acronyms, and multiple formation strategies. These linguistic patterns facilitate clarity, differentiation, and marketability in product naming, while also addressing trademark concerns and consumer recognition. Thus, a systematic investigation of these word formation

processes is essential to understand how language functions within trade and commerce contexts.

2.4. Word Formation Processes Used in the Pharmaceutical Field

The study of word formation within the pharmaceutical field remains underexplored in linguistic scholarship, despite its central role in branding, identity construction, and consumer engagement. Trade naming is an important aspect of linguistics even though many scholarly studies have not been conducted in this particular area, this research is not the only one that has analyzed word formation phenomena. There are some previous studies that are concerned with the topic.

There is a significant importance placed on word formation processes in the pharmaceutical product and commercial names. In an industry that is growing fast and very competitive, the utilization of word formation processes helps to separate oneself and increases brand recognition. Within the pharmaceutical sector, the processes of word formation have an impact on the identity, perception, and market positioning of medications and brands.

Pamungkas and Abdulah (2017) investigated the word formation process used in over-the-counter medicine products in Indonesia which impacted both businesses and customers. Using a qualitative descriptive method, the data was gathered from 57 over-the-counter drugs manufactured by Indonesian pharmaceutical companies that were selected at random. The primary subjects of the data categories developed using morphological theories were word construction strategies, product name strategies, and the FDA's regulatory guidelines for over-the-counter products. The results demonstrated that an accurate nomenclature approach based on linguistic features and word formation theories adequately captures the essence, traits, and application of over-the-counter products. Interestingly, the most common way of word construction was, blending (59.6%), which was followed by compounding (3.5%), clipping (1.7%), and an unidentified process (35%). Of the data, 65% of product name strategies focused on superiority, benefits, usability, and results; 35% of them lacked suitable application, with the exception of pronunciation. The study was related to the present study in a major way. Just as they studied over the counter medicine, the present study looked at five main categories of the drugs: antibiotic, analgesic, gastrointestinal, cardiovascular, and antihistamine medications.

While existing studies have highlighted the creative and commercial importance of word formation in pharmaceutical naming (Kang et al., 2009; Kavehrad & Koosha, 2016), they often lack a systematic linguistic evaluation that incorporates the sociolinguistic and pragmatic implications of naming conventions. The current study addresses this gap by analysing the morphological processes used in pharmaceutical names. Therefore, this research builds upon earlier studies by offering a linguistically grounded, context-sensitive analysis of pharmaceutical naming in a Pakistani context, which has received limited scholarly attention.

2.4.1. Word Formation Processes and Misinterpretation

It has been observed that, within the pharmaceutical industry, word formation processes are essential to create distinctive identities. A pharmaceutical company may create unique medicine names that improve brand identification by utilizing these processes. This attempt to create originality by word choice; nevertheless, raises questions regarding possible misinterpretations.

In this regard, Aronson (2004) suggested that care should be taken in choosing names of drugs in order to avoid confusion which often emanate from the use of common suffixes and prefixes. Additionally, Hoffman and Proulx (2003) stated that many different names for medicines can look or sound the same, which might lead to misunderstandings and possibly dangerous instances of dose errors. Pharmaceutical names that are most commonly misinterpreted are brand names, also known as proprietary names. In order to accomplish this goal, Antia et al. (2006) conducted an analysis of the morpho-semantic features of private medicinal names used in the pharmaceutical industry in Nigeria for three different pharmacological categories. Morpho-semantic approaches were utilised in order to study a corpus of trade names in order to evaluate the inventiveness of manufacturers' product names, the influence that these names have on unfair trade practices and adverse drug events, and the difficulties that regulatory bodies face. Manufacturers focus on fundamental themes or brand traits in trade names by using blending and clipping techniques. While there were some methods that were creative and imaginative, there were others that caused economic, regulatory, and health difficulties due to misunderstandings.

In another study, Pires et al. (2015) investigated the linguistic characteristics of Portuguese prescription brand names in order to identify whether or not they complied

with pharmaceutical regulations. The research evaluated 474 different brand names by employing both human (visual) and computer-based methodologies. According to the Portuguese phonological and spelling criteria, a significant proportion of names, 61.3%, did not match the requirements. These noncompliant names frequently have many words, a significant percentage of uncommon syllable types or stress patterns, and abbreviations. The findings imply that some Portuguese drug brand names need to be reevaluated and that laws pertaining to this matter need to be revised and enforced while taking particular spelling and language rules into account.

Some scholars have focused on the naming of brand names and generic names in order to find out the differences between them. For instance, Williamson (2013) concentrated on a particular group of pharmaceutical brand names and generic names under specific pharmacological classifications, revealing interesting observations and trends in the naming of these brands. The results emphasized the prevalence of innovative methods in the development of brand names, such as utilizing concealed significances from Romance languages as well as employing conventional morphological techniques like clippings and affixation. Such a combination creates confusion among readers, and the research suggested that proper naming techniques should be implemented while naming medicines.

In light of these challenges, the current study aims to extend the analysis by foregrounding the role of morphology in minimizing name confusion, thereby contributing to both linguistic theory and practical drug safety discourse.

2.4.2. Strategies to Mitigate Misinterpretations

Several academics recommend using certain tactics to lessen the possibility of misunderstandings and misinterpretations in pharmaceutical communication. The suggested methods include consistent name conventions, patient education initiatives, accurate and clear labelling, and adherence to linguistic standards. According to Aronson (2004), licencing authorities need to exercise more regulatory control over the names of newly developed proprietary formulas. The plan called for the process of naming nonproprietary products globally and pushed businesses to give significant consideration to naming newly developed proprietary formulations after recognized international brands. According to the findings of the study, it is recommended that

generics be given nonproprietary names, while over-the-counter medications be given distinct names.

Lambert et al. (2005) presented a number of different preapproval name misunderstanding risk assessment methodologies items that are similar, to consult with professionals, to carry out standard psycholinguistic tests. For this purpose, it is necessary to make use of computers in order to locate names or in order to evaluate memory and perception, and to analyse mistake rates in order to mimic ordering, dispensing, and administering duties. In order to decrease the misunderstanding of marketed items, it is necessary to collect feedback from volunteers that contain names that are misleading. Additionally, cautions and warnings must to be put up online and in locations where medications are utilized, especially at prescription drug sites. The researcher presented the following recommendations: one of the confusing medications should be taken out of the system, lighting should be enhanced, magnifiers should be available, and confusing pharmaceuticals should be kept in different areas. Furthermore, for items that are thought to be confusing, it's critical to insist on a second inspection. In order to minimize errors, it is necessary for experts to cooperatively prioritize assuring the safety of medicine names with pharmaceutical makers, the Food and drug Administration (FDA) and the World Health Organisation (WHO) (Davis, 1999).

Drug names can exhibit visual or auditory similarities, resulting in confusion and the possibility for detrimental prescription mistakes. Among the several categories of medicine names, brand (proprietary) names are the ones that are most frequently misunderstood. Some pharmacological names have been often misinterpreted due to their comparable visual or auditory characteristics. The problem may be worsened by factors such as illegible handwriting and clinical resemblance. This issue can be mitigated by measures taken by regulatory bodies, pharmaceutical producers, healthcare practitioners, and those seeking medical treatment. In response to the issue, substantial modifications are needed in the pharmaceutical regulation procedure in both the United States and Europe (Hoffman & Proulx, 2003). Errors might occur if the names of drugs are misunderstood due to an inaccuracy in vision or hearing. Filik et al. (2004) advocated for the use of "Tall Man" capitalization, which emphasizes the distinctions between items that are comparable by capitalizing major chunks of product names. In order to evaluate this strategy, eye-tracking was utilized. Eye movements

were used by the participants to look for a product on the package of the product and instead of the target pack, a distractor was used in its place. Changing the way the names were presented visually resulted in a reduction in the likelihood that participants would confuse a distraction with the medication.

It has been observed that after the increase in cases of misunderstandings and misinterpretations by consumers of medications, a large number of scholars stepped up to take on the issues of drug naming and branding. The aim of these scholars was to draw the attention of governments and regulatory authorities to solve these issues which were occurring as a result of illogical naming. In this context, Daabes and Ananzeh (2022) aimed to analyze the contemporary techniques that were being used for naming medicines in the modern world. The researchers adopted qualitative methodology for the study as it was exploratory in nature and they examined the techniques and methods used by drug companies while naming various drugs. The study utilized data obtained from the Jordan National Drug Formulary. The process of decoding medicine brand name processes involved four steps: selection, analysis along with extraction, and recommendation.

The study conducted a comprehensive review of 57 medication brand names, identifying and classifying three primary strategies used in drug brand naming: disease-related, company-related, and invented/unrelated names. In addition, generic as well as chemical names were identified as constants for newly developed medications. Similarly, Salsabili et al. (2020) examined the historical protocols for naming stereoisomer pharmaceuticals in the United States and globally, with a particular focus on the significance of accurate and uniform nonproprietary drug names in promoting the safe use of medications. They highlighted that there exists a significant gap between the nonproprietary names and the USAN (United States Adopted Names) stereoisomer naming criteria as most companies are not following the guidelines. As a result, important organizations such as the USAN Council, the United States Pharmacopoeia, and the Food and Drug Administration are required to provide proposals that are both universal and pragmatic. In an effort to enhance the delivery of healthcare on a global scale and more properly represent stereo-chemical features, the leadership of the FDA was requested to support a reevaluation of the criteria for stereoisomer identification.

By building on these scholarly insights, the current study further investigates how word formation processes in pharmaceutical names not only construct meaning but also negotiate between innovation, intelligibility, and safety—particularly within a South Asian pharmaceutical landscape.

2.4.3. Word Formation Process during COVID-19

In many cases, new language terms are sparked by unforeseen occurrences. These new lexical inventions are evidence of the resilience and flexibility of language in response to contemporary events. Unanticipated occurrences such as cultural revolutions, technological advancements, and global phenomena need the identification of new approaches to the description of concepts or experiences. Salman and Haider (2021) investigated English words and concepts that were associated with COVID-19. The research gathered 208 neologisms which were inspired by COVID-19 from various sources, including search engines, blogs, social media, and news articles. Based on the data, it was determined that the most prevalent processes for word formation were compounding and blending. Affixation, blending, and cutting were further processes.

Dewati and Kepirianto (2021) analyzed the word-formation processes of five Jakarta Post articles on COVID-19 and the environment. Taking notes, doing descriptive-qualitative research, and conducting morphological analysis were all components of the study. Derivation, borrowing, compounding, blending, clipping, acronym, and multiplicity are the seven processes that have been recognized as being responsible for the formation of words by research and compounding as well as borrowing-related processes were the most widely used. Similarly, Fitria (2021) looked at the COVID-19-related word-formation processes. The study used qualitative approaches to analyse 208 new words coined as a result of the COVID-19 pandemic. Moreover, sources for these neologisms include mainstream media, online discussion forums, and search engines. It was revealed that compounding, clipping, and acronyms were all word formation processes, with compounding and blending being the most popular.

In summary, while the above reviewed literature offers valuable taxonomies and typologies of naming strategies in pharmaceuticals, there remains a need for a culturally and linguistically contextualized analysis. The current research aims to fill this gap by employing a descriptive and interpretive linguistic approach to pharmaceutical brand

names in Pakistan, thereby complementing and extending the scope of existing scholarship.

2.5. Word Formation Processes and Pharmaceutical Companies

Companies may assign their goods unconventional names with ambiguous connotations in order to stand out in the competitive pharmaceutical industry. Udoye (2019) examined the morphological processes involved in pharmaceutical branding. The researcher stated that the medication name serves the purpose of identification and reference. The research concentrated on the morphological processes involved in identifying medicinal drugs, using the onomasiological theory. The researcher employed reputable pharmacology textbooks and internet journal publications to analyse drug nomenclature data. The results indicated that generic medication names are frequently formed by combining prefixes and roots that are associated with the drug categories to which they pertain. These findings are particularly relevant to the present study, which also explores how morphological processes such as prefixation and compounding are strategically employed to shape perceptions of efficacy, innovation, and identity in pharmaceutical naming.

Pharmaceutical companies use this distinctive nomenclature on purpose to set themselves apart from competitors in a congested market and create a distinctive brand identity. A pharmaceutical brand distinguishes itself from other brands by having both a generic name and a name assigned by the product's proprietor. If the corporation introduces a novel pharmaceutical compound onto the market with a compelling, remarkable, and enduring name and sound, it will be remembered by both clients (patients) and those in good health. If the brand becomes recognized as the dominant one in its specific therapeutic area, then all the succeeding names within that category will likely be overshadowed by this initial brand. Notable names in this context include Xerox, Bislery, Pepsi, Lux, Corex, Strepsils, and Eno, among others. The importance of quality is crucial in the success of innovative goods such as Xerox, Maggi, and Bisleri. If these items were not successful and of high quality, customers would not have shown interest in other businesses associated with these names (Antia et al., 2006a). Moreover, while exploring the role of advertising, Wamble (2018) analyzed the intricacies linked to the creation of brand names in the pharmaceutical sector of the United States, with a specific emphasis on the identified patterns in contemporary

pharmaceutical brand names. The approach employed was the selection of 100 research participants from a patient panel who self-reported having rheumatoid arthritis. Following their division into the fluent and disfluent groups, these people were exposed to brand names of pharmaceuticals associated with their illness. The participants were instructed to picture themselves in a promotional scenario where they would meet the brand names and assess their level of familiarity, perceived risk, and willingness to request the pharmaceutical product. The findings showed that those who were exposed to easily spoken brand names did not think the products were more recognizable. Moreover, there was no evidence that the goods' perceived threat was affected by their ease of pronunciation independently of their familiarity effect. Moreover, the perceived risk did not affect the desire to seek the medicinal medication, regardless of the severity of the illness. While Wamble (2018) focused on the psychological reception of pharmaceutical names among consumers, the current study shifts attention to the linguistic construction of such names within broader socio-commercial narratives.

In order to further explore the concept of trade naming, Auta et al. (2012) examined the naming of pharmaceuticals and determined that pharmaceutical trade names are artificially created terms designed to evoke feelings of strength, speed, or calmness, without guaranteeing a cure. A brand name is a combination of distinct phonemes, which are sound units that symbolize characteristics or properties of the medication. If customers seek these features, they would have an immediate inclination to try the items, particularly over-the-counter (OTC) ones such as Vicks, Itch Guard, Crocin, and Iodex. Companies desire a brand name that is attractive, perhaps resulting in substantial financial gains amounting to billions of dollars. With the increasing number of pharmaceutical products being created and introduced to the market, the process of naming a new medicine becomes increasingly challenging and significant. There is a vast array of pharmaceuticals and brand names available in the market, and a mistake can happen at any stage of the distribution process: from the doctor who prescribes the medication, to the pharmacist who dispenses it, to the hospital staff who administers it, or to the patient who takes it. Similarly, Ullah and Mir (2021) explored the methodology of assigning names to homoeopathic remedies, with a specific emphasis on analyzing language patterns and techniques of word creation. A random selection of homoeopathic medications from firms including Paul Brooks, along with Dr Masood Homoeopathic Pharmaceutical, which are commonly used in Eastern

nations, were chosen for study. The study thoroughly examined the morphological aspect of medication names and their commercial applications, using Onomasiological Theory of Word-Formation. The investigation explored the lexical and semantic connections of the names, taking into account the componential characteristics of homoeopathic medicine. The findings emphasized the significance of linguistic norms, the requirements of the speech community, as well as external factors in the process of naming, resulting in a dynamic and productive outcome.

Drugs possess implications and narratives associated with their names. At now, the medication molecule known as atorvastatin has the title of being the largest-selling in the world. It is marketed under the brand name Lipitor, which is owned by Pfizer. It functions as a lipid regulator. Lipitor obtained its name by incorporating the "tor" from atorvastatin, the generic name from the stem. The term "statin" refers to a class of drugs that are used to treat cardiovascular conditions. *Infliximab, bevacizumab, rituximab, alemtuzumab*, and *cetuximab* are pharmaceuticals used as anti-cancer agents. The technique underlying that medicine is the use of monoclonal antibodies, which are denoted by the suffix "mab" in all these names. The word Viagra is derived from the prefix "vi," which signifies strength and energy, while the latter part is derived from Niagara, evoking the imagery of the force and intensity of Niagara Falls. Thus, this may potentially be the ideal designation for a pharmaceutical product that is medically prescribed to treat erectile dysfunction. Levitra, a rival of Viagra, derives its name from the combination of "elevate" and "Le," which signifies masculinity in French, while "vitra" alludes to life. In India, a generic form of Viagra is marketed under the name Silagra, derived from its active ingredient, sildenafil (Gangwal & Gangwal, 2011). Similarly, Anita et al. (2006) examined the morpho-semantic characteristics of drug commercial names. Manufacturers frequently utilize blending and clipping techniques to encode the brand features, as noticed. Furthermore, they found that the amalgamation of generic medicine names has the capacity to perplex and mislead people.

Pharmaceutical names sometimes utilize the extensive linguistic legacy of Latin and Greek origins, despite their modern compositions. Companies which use this tactic aim to convey precision and enhanced understanding of their drugs to their customers. Additionally, such companies also follow the standardized pharmaceutical nomenclature in order to provide historical background to their drugs as it also plays an important role in the process of identification by customers. In this context,

Krzymianowska (2020) conducted a study on new medical terminology of Poland and examined the use of Latin and Greek roots in the names of drugs. Moreover, the researcher also explored the tactics used by drug companies while naming their drugs using Latin and Greek roots. The researcher adopted a qualitative methodology and collected data in the form of non-prescription pharmaceutical names in Latin and Greek used by the companies, as well as, therapeutic product names in English and Polish. The purpose of such an attempt was to analyze various components of drugs such as natural resources, chemical components, illnesses, and anatomical features. After careful analysis, it was highlighted that Latin and Greek contributed majorly to the development of new terminology. It was also revealed that companies which used trade names to represent the product's efficacy and potency of the drug performed much better in the market as compared to other companies. Collectively, these studies underscore the morphological creativity, etymological foundations, and semantic manipulation prevalent in pharmaceutical branding. The present research builds on this foundation by examining how such naming conventions contribute to brand identity formation and public reception, especially within socio-culturally situated contexts. By linking linguistic innovation with consumer perception and market dynamics, this study offers a multidimensional account of pharmaceutical nomenclature.

2.6. Relevant Studies in the Context of Pakistan

It is believed that relating research to its native context and situating it within its native context plays a major role in enhancing the scope of the study. While a considerable number of studies have explored word formation processes across various media and social domains in Pakistan, there remains a lack of scholarly attention to their role in professional and industrial sectors such as pharmaceuticals. Situating the current research within this native linguistic context allows for the examination of how these processes function beyond informal or entertainment-oriented platforms.

In this regard Tariq (2018) analyzed the presence of word formation processes in the humor show called “Khabarnaak.” Moreover, the researcher aimed to examine the word formation processes in the selected show by evaluating oral presentations. With regards to sample of the study, random sampling technique was used and thirty episodes of the selected show were chosen to be transcribed. The research was divided into two phases and in the second phase, neologisms that were used in the selected show were

analyzed with the help of various resources such as dictionaries and online sources. This practice involved steps such as categorization and organization of newly coined words as well as the evaluation of other word formation processes. The findings of the study suggested that most of the neologisms used in the show were in the English language, however, there were also instances of neologisms written in Urdu or Punjabi languages respectively. In a different and unrelated attempt, Gul et al. (2022) the impact of COVID-19 on the human language, focusing specifically on word formation process and semantics. The researcher adopted qualitative methodology for the study due to its nature and aimed to analyze the changes that occurred in the vocabulary of Pakistani English due to COVID-19. After careful examination and analysis, it was revealed that various changes had occurred in the language specifically in two aspects i.e. semantics and newly formed words. The researcher particularly focused on two word formation processes i.e. compounding and blending in order to point out the changes that occurred in the language during COVID-19. The findings of the study exhibited immense impact of COVID-19 on the language.

Social media and fashion are two integral aspects of any society as well as culture. Malik (2015) analyzed the linguistic iconicity of brand names in electronic commercials in Pakistani context by making use of word formation processes as a theoretical background. The researched adopted a quantitative methodology for the study and examined the frequency as well as proportion of word formation processes. The findings highlighted that, brands made use of word formation processes in various aspects of their products such as expressing attributes, quality, flavor, function, effect, ingredients, usage, and owner identification. It also revealed that such tactics affected the behavior of consumers regarding the manufacturer and the product. Most of the brands used English instead of other local languages and in the case of word formation processes, compounding was the most prevalent. Although Malik (2015) primarily focused on branding in commercials, the study provides foundational insight into how linguistic strategies, particularly word formation processes, influence consumer perception.

The current study extends this approach to pharmaceutical trade naming, which, while similarly branding-oriented, requires greater precision due to regulatory, ethical, and communicative constraints in medical contexts. Furthermore, Shakil and Siddiq (2023) investigated a recently popular Instagram pseudo-language, focusing on the

construction of culinary words. Twenty Instagram-posted culinary neologisms were analysed descriptively and qualitatively. By applying Stekauer's (1998) Onomasiological Theory of English Word-Formation to a subset of words, the research exposed the adaptability of the English language. According to the findings of the study, Instagram phrases clarify dining experiences and attract customers. Zaheer (2017) conducted an investigation into the Word Formation Processes (WFPs) of SMS-learning college students in Pakistan. The WFPs were selected by fifty male and fifty female BBA students for the purpose of conducting the analysis. SMS utilized conventional word formation processes (WFPs) as opposed to continuous ones. A notable disparity existed between the evaluations provided by males and females. With regard to expressing their gender identity, empirical evidence indicates that WFPs influence men and women differently. Although the study discovered that clipping, mixing, backformation, and acronyms were more common than non-standard processes, it does not change the fact that SMS language is usually seen as a threat to established language patterns. Women had a greater proportion of WFPs (word formation processes) utilization, showing a preference for techniques such as clipping, acronym formation, and the use of letter homophones in their text. This study highlighted how word formation strategies reflect sociolinguistic variables such as gender and digital discourse. However, unlike digital SMS language, pharmaceutical trade names demand controlled, deliberate, and institutionally mediated naming practices. Thus, the current study investigates how word formation operates under such constraints, especially in relation to regulatory guidelines and branding imperatives.

This section provided a thorough examination of literature on word formation processes specifically in the context of Pakistan. A substantial body of research has extensively examined the processes of English word formation in several domains of the Pakistani context, including print media, social media, electronic media, as well as the fashion sector, among others. These studies have made a substantial contribution to our comprehension of language dynamics in these areas. Significantly, there is a gap in research as least focus has been given to studying word formation processes in the pharmaceutical business within the Pakistani setting.

2.7. Conclusion

In order to place the current study into a larger academic discourse, the chapter explained a number of studies looking into word formation processes. First, it gave a brief overview of how words are formed, outlining basic ideas such as the morpheme and its variations in the context of morphology, a branch of linguistics. It then summarized many viewpoints on word-formation processes by researchers in the field and gave an initial overview of their typologies. Finally, research done in the Pakistani environment was highlighted in an effort to situate the current study within its pertinent sociocultural context.

CHAPTER 3

RESEARCH METHODOLOGY

The current chapter describes the research methods and data analysis procedures. It outlines the steps involved in preparing the research sample for the current study. Furthermore, it explicates the instruments employed for data collection and the procedures followed for data analysis. Additionally, the discussion in the chapter encapsulates the credibility and consistency in terms of validity and reliability of the data used for the research.

Research methodology comprises principles, techniques and procedures that are used to conduct research. It is the process followed by the researcher to collect, analyze, interpret, and describe data that is relevant to the research questions (Creswell, 2012).

3.1. Methodological Approach

The present study follows mixed methodology as the study is qualitative as well as quantitative in nature. Mixed methodology combines qualitative and quantitative research approaches in order to gain a deeper understanding and to provide a more comprehensive solution to a research problem (Creswell & Creswell, 2018). Furthermore, Ary et al. (2009) state that the purpose of combined methodology is to gain deeper understanding rather than relying only on numerical data analysis. In the current study, the researcher traces out the word formation processes used in the trade naming of pharmaceutical drugs. The research method is comparative because the comparison has been conducted between the national and multinational pharmaceutical companies on the basis of word formation processes. Moreover, at the quantitative level, the frequency of each word formation process has been determined and presented in tabular form to determine if there are distinct patterns or trends in the trade naming of national and multinational pharmaceutical companies.

According to Fetterman (1989), the interview procedure is a verbal interaction and exchange of views between a researcher and participants is an essential practice for data collection. It is a very useful procedure which is employed to collect a particular type of data in the respondents' personal words, allowing a kind of insight into comprehending a particular phenomenon (Bogdan & Biklen, 1998). The current study takes discussion and interpretation qualitatively by conducting semi-structured

interviews with the pharmaceutical companies to investigate the perspectives of national and multinational pharmaceutical companies in Pakistan regarding word formation processes in the trade naming of pharmaceutical drugs.

3.2. Research Design

According to Blaikie (2019), a research design is the comprehensive strategy or overall plan that guides a research study from its conception to the final step of analysis. The design of the current study integrates both quantitative and qualitative approaches to thoroughly investigate the research problem and provide a comprehensive analysis. It follows a mixed-method approach specifically an exploratory and comparative research methods. Neergaard et al. (2009) state that the qualitative description is particularly useful and highly effective in mixed methods research studies because of its descriptive nature that integrates with quantitative techniques. In the current study, the quantitative level encapsulates the identification, description, and presentation of word formation processes (WFPs) in the trade names of pharmaceutical drugs, while the qualitative part involves semi-structured interviews with pharmaceutical companies to explore their naming strategies and techniques. Therefore this study has two phases. The first phase comprises a quantitative analysis using the method of content analysis where the word formation processes were analyzed and quantitatively presented to answer the 1st and 2nd questions. Moreover, the second phase involves a thematic analysis of the semi-structured interviews conducted with the selected national and multinational pharmaceutical industries to answer the 3rd question of the study.

3.3. Data Collection

The data for the current study has been collected from the selected national (Metro, Warrick, and Pearl) and multinational (Pfizer, Getz and GSK (GlaxoSmithKline)) pharmaceutical companies. The researcher collected the data, identified the word formation processes and compared the frequency between the national and multinational trade naming on the basis of word formation processes. The data, in the form of lists of drugs' names were taken from each selected company. Informed consent was obtained from the pharmaceutical companies before data collection. This ensured the ethical compliance and established a direct line of communication with the primary sources of information. The researcher also collected data through semi-structured interviews from the selected pharmaceutical companies.

The study comprised six interviews which were taken with the intention to know the perspectives of pharmaceutical companies regarding word formation processes.

3.4. Data Source

Douglas (2015) states that primary data is firsthand information that is collected directly from the participants of the study to represent genuine and real-time information (Mesly, 2015). For the current study, the researcher collected data primarily through primary sources i.e. head offices of the selected national and multinational pharmaceutical industries. The researcher obtained lists of the trade names of the drugs directly from the companies.

Apart from this, the researcher also conducted semi-structured interviews with the brand manager of each company. One person from each company consented voluntarily to take part in the interview. Gathering data from primary source ensured high accuracy and validity of data that it accurately addressed the research questions.

3.5. Population

The total subject of the research project is termed population, (Arikunto, 2002). In other words, it is the entire group from which the sample is selected for analysis. In the current study, it involved various types of pharmaceutical companies that discovered and named drugs across different therapeutic categories. So, the national and multinational pharmaceutical companies of Pakistan have been taken as population.

3.6. Sample Frame

Pandey and Pandey (2015) describe sample as the elements selected from a population to generalize and reflect the attributes of that particular population. The sole purpose of the sampling was to make generalizations regarding a larger population on the basis of data that was gathered from the sample. The researcher's sample area for the current study was Pakistan. To accomplish this research study, three national pharmaceutical companies i.e. Metro, Warrick, and Pearl and three multinational pharmaceutical companies, i.e. Pfizer, Getz, and GSK (GlaxoSmithKline) were selected as the research sample. The primary source of the data for the current work consisted of naming lists from national pharmaceutical companies and multinational pharmaceutical companies.

3.7. Sampling Technique

Sampling technique refers to the method used to select a sample from a population. Acharya et al. (2013) describe it as the approach that is used to draw valid inferences from the selected sample. For the current research study firstly the companies from national and multinational pharmaceuticals were selected, secondly the categories of pharmaceutical drugs from the lists provided by pharmaceutical companies were chosen, and thirdly due to time constraints, five drugs' names from each category of drug were selected for analysis. A diverse sampling technique was employed in the study to ensure a comprehensive and representative analysis of word formation processes (WFPs) in the trade naming of pharmaceutical industries at local and multinational levels.

3.7.1. Selection of Pharmaceutical Companies

Non-probability convenience sampling was used for the selection of pharmaceutical companies. Three national pharmaceutical companies i.e. Metro, Warrick and Pearl pharmaceuticals and three multinational pharmaceutical companies, i.e. Pfizer, Getz and GSK (GlaxoSmithKline) pharmaceuticals were selected primarily due to their easy accessibility and the availability of drugs across all five therapeutic categories included in the study. These companies were preferred because they offered a comprehensive range of relevant medications. Additionally, formal permission was obtained through official letters sent to these companies, ensuring their consent to use publicly accessible drug data for research purposes. This step was taken to uphold ethical standards and maintain the integrity of the research process by securing proper authorization for data usage. In this way, a total of 6 pharmaceutical companies participated in the current study.

3.7.2. Selection of Categories of Drugs

Five categories of pharmaceutical drugs have been chosen to conduct this study. The selection of categories followed purposive sampling. In purposive sampling, the researcher selects participants or cases based on specific criteria that are relevant to the research questions. In this case of selecting drug categories for the current study on pharmaceutical naming, the researcher employed purposive sampling to choose the categories such as antibiotics, analgesics, antihistamines, gastrointestinal, and cardiovascular drugs. These categories were chosen because they are widely used in the

treatment of commonly occurring health issues. These categories cover medications frequently prescribed for infections, pain relief, allergic reactions, digestive problems, and routine cardiovascular management. Their high usage in general medical practice, particularly in primary care settings, makes them relevant for examining trade naming patterns. Selecting these categories ensures that the study focuses on drug names that are familiar, frequently encountered, and significant in everyday healthcare contexts. Choosing multiple therapeutic categories of drugs enhanced the generalizability and applicability of the study making the findings more valuable for understanding the trade naming practices of pharmaceutical industry as a whole.

3.7.3. Selection of the trade Names from Each Category of Drugs

Five drug names from each category of drugs were chosen through simple random sampling. Random selection helped to ensure that the sample of drugs reduced the risk of partiality in the selection process. In the present study the names of drugs were arranged in numerical order. Then the researcher used random number generator to generate five random numbers from each category of drugs and selected the drugs corresponding to those numbers.

Thus, the researcher chose a total of 150 trade names of drugs combining both national and multinational sectors that ensured a robust sample size covering a diverse range of therapeutic categories. This approach allowed a comprehensive comparison of word formation processes used in trade naming of drugs at national and multinational level in Pakistan.

3.8. Data Collection Methods

In the endeavor to fulfill the objectives of the current study, two primary research instruments were employed: formal letters soliciting the lists of drug names and semi-structured interviews.

3.8.1. Formal Letters

Formal request letters addressed to each pharmaceutical company at national as well as multinational levels enabled the direct access of the researcher to the pharmaceutical industries. The letters maintained a professional tone and outlined the purpose of the research and specified the data needed for the current study. The researcher explicitly stated the intended use of the required data that the data would be

used solely for academic purposes and not for any commercial endeavors or other personal gains. Furthermore, the confidentiality and privacy of the participants were ensured. In this way, this approach respected the rights of the participants as well as maintained the ethical standards throughout the process of data collection.

3.8.2. Semi-Structured Interviews

The researcher also conducted semi-structured interviews with the selected national and multinational pharmaceutical companies. The researcher conducted the interviews to comprehend the trade naming practices of the pharmaceutical drugs at both local and multinational levels. Ethical considerations and obtaining consent from the participants were an integral part of this phase. So, the Participants were provided with clear purpose and procedure of the interview and verbal consent was obtained from all participants before proceeding. Each interview with a pharmaceutical company was scheduled to be conducted within 5 to 7 minutes. All the interviews were recorded, documented, and thoroughly analyzed and interpreted to gain essential insights into the trade naming. These measures helped to maintain the integrity throughout the research process.

3.8.2.1. Interview Guide

In pursuit of data collection through semi-structured interviews, an interview guide containing questions was meticulously designed by the researcher to collect data. After undergoing several revisions, the interview guide was finalized to effectively conduct semi-structured interviews with the selected pharmaceuticals. The guide was designed to facilitate data collection from pertinent participants aligned with the study's objectives.

3.9. Research Method

According to Krippendorff (2004), content analysis is a systematic approach that aims to categorize and quantify the textual data ensuring that the analysis is replicable and transparent. Content analysis is one of the most useful methods to analyze documented data in the form of the text, media or even physical items. In this study, the trade names of pharmaceutical drugs were analyzed using content analysis. To conduct this study, Creswell's (2009) six-step content analysis method was used to trace out word formation processes in the trade naming of the local and multinational

pharmaceutical drugs using the word formation processes proposed by O'Grady and Archibald (2016). Apart from this, semi structured interviews were also taken to conduct thematic analysis particularly to answer the third question of the study. It was done to unfold the morphology of the trade names of drugs identifying the processes, patterns and trends. Creswell's (2009) six-step content analysis method is described below:

3.9.1. Organization and Preparation of Data

This step encapsulated collecting a representative sample of trade names of drugs from both national and multinational pharmaceutical industries. Furthermore, semi-structured interviews were conducted with selected pharmaceutical companies. After collecting the data, the researcher organized and prepared it for analysis. This included classification of the therapeutic drug categories and selecting the trade names of the drugs for analysis. Apart from this, it also involved documenting the recorded interviews.

3.9.2. Read through all the Data

In the second step, the collected data was carefully read by the researcher. The researcher reviewed the lists of drug names and interviews transcripts to understand the content. By keenly reviewing the data, the researcher intended to understand the various word formation processes appeared in the trade names of the drugs.

3.9.3. Coding of the Data

Coding of the data is the third step proposed by Creswell (2009) that involves assigning of specific codes and labels to the data. In the current study, the researcher assigned codes to the collected data and refined the themes for the qualitative analysis of the interviews.

3.9.4. Interrelate the Data

The researcher measured and compared the frequencies of various WFPs in both national and multinational trade naming. The researcher investigated the similarities and differences between the WFPs in the trade naming of national and multinational companies. The qualitative data from interviews was also contrasted with the quantitative findings. By interrelating both quantitative findings and qualitative

insights, the researcher was able to get a holistic view of trade naming of pharmaceutical drugs at local and multinational levels.

3.9.5. Interpret the Results

This is the very crucial step of the analysis where the researcher tried to explore and discern the reasons behind the use of certain naming practices at both pharmaceutical levels. This step also involved the interpretation of the data to gain a deeper understanding of the trade naming. In this way the researcher looked for particular trends, processes, patterns, and differences between the trade naming of national and multinational companies in Pakistan.

3.9.6. Presentation of the Findings

The researcher presented the findings of the study in the final step. The findings were presented clearly to portray the word formation processes used in the trade naming of pharmaceuticals. The researcher used tables to present the frequency percentages of each word formation process (WFP) encountered in the trade naming of national and multinational pharmaceutical companies. Along with the quantitative data, the researcher also analyzed and interpreted the recorded interviews and presented themes to highlight the perspectives of Pakistani pharmaceuticals regarding naming of drugs.

3.10. Theoretical and Analytical Framework

Word formation processes as mentioned in the earlier chapters have evolved and been refined by various linguists over time, with some additions to earlier frameworks. These processes are not solely attributed to one specific linguist, as they have been introduced and modified by many experts in the field through time.

First of all, Hockett (1960) made a significant contribution in the field of linguistics that covered many fundamental concepts of word formation, i.e. compounding, derivation, conversion, clipping, blending, acronyms, back-formation, borrowing, reduplication, coinage, and eponymy. Afterwards, Dokulil (1962) proposed the onomasiological theory, highlighting distinction between word-formation process es and word-formedness. His theory categorized word-formation into the onomasiological base (general category) and mark (specifying element). Following theory of Dokulil (1962), further contribution was made by Stekauer (1998), who suggested that onomasiological theory of word formation indicates a relationship

between word formation and lexical components. He further said that names are coined either by choosing the word formation components or lexical components which are part of regular word formation rules, or lexical component. In this regard, he also propagated various levels of word formation such as onomasiological level, semantic level, phonological level, onomatological level, and conceptual level.

Subsequently, other linguists have made several attempts to categorize and classify word formation processes. Bauer (1983) put word-formation processes into two broad categories. The first one includes affixation, compounding, and conversion, while the second includes clipping, blending, and acronyms. Katamba (2005) classified word formation processes into two main categories: inflection and derivation. According him, derivation is divided into three main classes: affixation, conversion, and compounding. Meanwhile, according to Minkova and Stockwell (2009), the English word-formation processes are categorized into ten different types: derivation with affixation, derivation without affixation, blending, compounding, and creation de novo, clipping, back-formation, abbreviations (acronyms and initialisms), eponyms, and other sources. Brinton and Brinton (2010) divided the word formation processes into eight different types: derivation, reduplication, conversion or functional shift, compounds, blends, back formations, shortening, and root creations.

According to Yule (2010), there are ten types of word formation processes, including coinage, clipping, borrowing, blending, compounding, backformation, conversion, acronyms, derivation, and multiple processes. Lieber (2016) divided word formation processes into eight different types that are affixation, conversion, compounding, coinage, backformation, blending, clipping, and initialism.

3.10.1. O'Grady and Archibald's Classification

In the current study, the researcher brought into use the comprehensive compilation of word formation processes presented by O'Grady and Archibald (2016) in their book *Contemporary Linguistic Analysis*. The word formation processes employed in this study included coinage, compounding, borrowing, blending, clipping, reduplication, acronyms, and derivation.

i. Coinage

One of the common processes of word-formation in English is coinage i.e. the invention of totally new terms with no prior existence. It is also known as word-manufacturer. Coinage is the creation of the totally new words with referring to the most topical sources which are invented to the trade names for certain commercial products. Brand names sometimes become so widely used and accepted that they are accepted as generic terms and generalized to other product names. According to O' Grady and Archibald (2016), coinage is the common process used in terms of product names. For example, the word Kleenex for "facial tissue", Google for "internet search", Xerox for "photocopy" etc. These words began as invented trade names and which now have become everyday words in a language.

A very fine example of coinage from pharmaceutical sector is "Panadol". Although it is originally a global brand and is also widely recognized in Pakistan. This name "Panadol" is coined to present a panacea or comprehensive remedy, conveying its effectiveness in pain relief. Similarly, Rigix is a brand name for an antihistamine drug used in Pakistan. This name is also coined to imply quick and effective relief from allergies.

ii. Compounding

Compounding is the formation of new word by joining of two or more separate words into a single form. For example, the two words wall and paper which have different meanings taking together become a single form of word as wallpaper which is quite different from those two words. According to O' Grady and Archibald (2016), a lexeme containing two or more potential stems is called a compound word. In compounding each potential stem contains at least two roots. Compounds can be combined with other words to create still larger compounds. If one of the potential stems that makes up the compound is itself a compound, the resultant word, of course, will contain more than two roots e.g. waste-paper-basket, Full-time-job, etc.

It is noticeable that O' Grady and Archibald (2016) also suggest that compounding can interact with derivational process. For instance, the word "election date" is the combination of two separate words in which the first word is the result of derivation whereas the second stem does not contain any derivational process. Furthermore, they suggest that compound words are sometimes written as single words without any space between, sometimes with a hyphen, and sometimes as separate words without hyphen.

iii. Blending

Different from compounding process that is joining two separate words into a single form, blending process has a little bit difference. Typically blending process is accomplished by taking only the beginning of one word and joining it to the end of the other word. For example, the term brunch for breakfast and lunch and the term telecast for television and broadcast. Recent well-known examples are “Wi-Fi” by wireless and hi-fi, and “bromance” from brother and romance.

Very often it has been seen that words are formed following a blending process that lies between compounding and blending, merging a full word with a small segment of another. Example in English include: Email from “electronic” and “mail”, Medicare from “medical” and “care” etc.

iv. Clipping

The element of reduction which is more noticeable in the process of blending becomes more apparent in the process described as clipping. Clipping is the process of reducing the elements of word. This process of truncation occurs when a polysyllabic word (a word of more than one syllable) is reduced to a shorter form. The term “gasoline” is still in use but occurs less frequently than gas, the clipped form.

According to O’ Grady and Archibald (2016), clipping is one of the ways to create new words by shortening the polysyllabic word and removing one or more syllables. For example, prof for professor, psych for psychology, burger for hamburger, etc.

There are four types of possible clipping processes, depending on which part of the word undergoes structural changes or clipping.

Back clipping is also known as apocope that involves a process of shortening of a word by cutting off the final part of that word e.g. photograph— photo, gym — gymnasium, etc. The word “photograph” is shortened by cutting off the final part “graph,” leaving photo. Similarly, the word “gym” is derived from “gymnasium” by removing the latter part “-nasium”. In this type of clipping, the initial part of the word is retained.

Fore-clipping is termed as precope that involves a process of shortening a word by removing the beginning part of a word e.g. helicopter — copter, and telephone — phone, etc. in the mentioned examples, the initial part “heli” is removed from

"helicopter," resulting in "copter" that is the simplified term. Similarly, in the 2nd example, the beginning part "tele" is removed from "telephone," resulting in "phone".

The process of mid-clipping is less common and often produces more informal or colloquial terms. Mid-clipping is also known as syncope that aims to keep the middle part of a word while omitting the beginning and the final parts of the words. It retains the significant part of the original word. For example, the beginning and ending parts of the word "influenza" are omitted while the central part "flu" is retained. So, the actual term "influenza" is formed into the shorter word "flu" by removing its initial and final parts.

The process of complex clipping involves removal of more than one part from different sections of the word. In this phenomena, different alterations are conducted in a compound or phrase and then combined to make a new word. This process often forms novel words like abbreviations. For example, the word "situational" is shortened as "sit" and "comedy" as "com" combining to form "sitcom", and "ESL.ph." (English as a Second Language, Philippines) involve multiple layers of reduction. So, the complex-clipping often implies combination of different types of clipping.

O' Grady and Archibald (2016) suggest that each type of clipping process simplifies the original words by removing different bits of words, making them convenient to use.

v. Borrowing

Language often seeks words from other language. One of the most common sources of new words in English is the process simply labelled as borrowing. Borrowing is a process in which one language borrows words from other languages. This linguistic phenomenon occurs when speakers of a particular language adopt vocabulary from different languages due to several reasons such as trade and commerce, cultural exchange, or technological development. The borrowed words are termed as "loanwords." Innovations always necessitate new terminology, so interaction through trading sometimes introduces new goods and terms that are borrowed.

A language can take words directly from another language with a little bit or no modification e.g. ballet from French, kindergarten German, and Pizza from Italian. These words are taken directly from source language into borrowing language.

Sometimes, the elements from both the source and borrowing language can be combined to form new words i.e. television combines Greek tele with Latin vision. This type of words is called loan blends.

For example, aspirin is the German trade name, which has been derived from the Latin word “spiraea,” the breed of plant from which the drug was originally discovered. Similarly, Penicillin is also derived from the Latin word “penicillium,” a sort of fungus.

A special type of borrowing is described as loan-translating in which the direct translation of elements of foreign language into borrowing language occurs such as skyscraper is translated to French “gratte-ciel”, superman to German “ubermensch”, and loanword to German “lehnwort”. This type of borrowing is termed as calque or loan translation.

English has always welcomed the process of borrowing and adopted a vast number of loan-words from other languages like piano, pizza, and studio are taken from Italian, kindergarten and doppelganger from German, fiesta, mosquito, and siesta from Spanish, feng shui, tea, and ketchup from Chinese, and al Qaeda, and alcohol from Arabic.

vi. Reduplication

Reduplication is one of the productive linguistic phenomena to create words by marking a grammatical, semantic or phonological contrast and repeating full word or part of it. For instance, razzle-dazzle, nitty-gritty, etc.

O’ Grady and Archibald (2016) divide this versatile phenomenon into two distinct categories i.e. partial reduplication and full reduplication. Full reduplication involves repeating the entire word e.g. “bye-bye”, “go-go”, whereas partial reduplication involves repeating only a part or a segment of the word, often with a slight alteration e.g. chit-chat, hocus-pocus, and zigzag. This is done to create words that imitate sounds. For example, tick-tock, ding-dong, etc.

Sometimes, it is used to intensify the meaning of a word e.g. “very, very hot” can be expressed as “hot-hot” in some contexts to imply extreme heat. It is often used in the advertisement of particular brands, examples include Krispy Kreme, KitKat, Coca-Cola, etc. This technique creates a sense of balance and rhythm in the brand name.

vii. Acronym and Initialism

According to O' Grady and Archibald (2016), an acronym is one of the common word formation processes to build new words by taking the initial letters of some or all words in a phrase or title. The initials that are taken to formulate new word are pronounced as single word for the ease of communication. These acronyms usually consist of capital letters as in NATO (North Atlantic Treaty Organization), NASA, and AIDS (Acquired Immune Deficiency Syndrome), etc. This type of word formation process is usually used in organizational names, in military associations and scientific terminology. For example, UNICEF for United Nations International Children's Emergency Fund, CIDA for Canadian International Development Agency, etc.

Acronym and Initialism are often used synonymously and interchangeably but there is a little bit difference between both terms. Although initialism is similar to acronym process, however in initialism, the initial letters are not pronounced as single word but pronounced as a series of individual letters e.g. PEI is used for Prince Edward Island. So, the prominent distinction is that acronyms are pronounced as complete words (e.g., NATO, pronounced as "nay-toh") whereas initialisms are pronounced letter by letter (e.g., USA pronounced as U-S-A).

Apart from this, O' Grady and Archibald (2016) also propose the intermediate cases in which a compound combines an initialism as well as an acronym to create a new word e.g. CD (Compact Disc) and ROM (Read-Only Memory). It is pronounced as CD Rom.

Besides this, they also pointed that some acronyms become so integrated and widely accepted and used in a language that people sometimes do not realize that they were originally started as acronyms and consider them as standard words e.g. laser (Light Amplification by Stimulated Emission of Radiation). Likewise, some acronyms sound like existing words in a language, so they become more easily accepted and used e.g. AIDS is pronounced as a single syllable that make it easier to remember and use in communication.

viii. Derivation

According to O' Grady and Archibald (2016), derivation the way to create new words by adding an affix or multiple affixes to the base word. In the derivation, a word that is added as an affix to a word can change the category of that word. For example, the word "treat" combines with the suffix "–ment", and it becomes "treatment". The

affix “ment” changed the word class from a verb “treat” into a noun “treatment”. Apart from this, the word penicillin is derived from “Penicillium,” (the mold from which penicillin was first derived) by adding affix “in” to the end of the word.

Affixation comprises of two processes i.e. Prefixation and suffixation. Prefixes are the affixes that are attached at the beginning of the words (e.g. un-, mis-). While suffixes are the affixes which are added at the end of the words (e.g. –less, -ness, -ish). The examples of prefixes are unforgettable, misunderstanding, and impossible. While, the examples of suffixes are useless, loneliness and boyish etc.

Furthermore, O’ Grady and Archibald (2016) suggest that derivation can be applied to a word more than once. For example the word “activation” encapsulates multiple layers of affixation within it. In the deepest layer, the affix -ive is attached to the base word act. Similarly, in the next layer, the suffix -ate is attached to the adjective “active” that converts it into a verb (activate). And finally, by adding the affix -ion, the new word activation is formed. According to O’ Grady and Archibald (2016), this type of derivation is termed as complex derivation.

The classification of word formation processes by O’ Grady and Archibald (2016) is the most recent and elaborated as well, because O’ Grady and Archibald (2016) have modified and updated the pre-existing processes. So, the researcher has chosen their classification for the analysis because it is the latest classification available.

3.11. Ethical Considerations

Throughout the entire research, a comprehensive examination of all pertinent ethical considerations was carefully undertaken.

3.11.1. Informed Consent

During the data collection phase, informed consent from selected pharmaceutical companies was observed as a requisite condition. Specifically, all participants, notably the representatives of the selected pharmaceutical companies were initially approached through proper channels. Subsequently, formal permission was granted from each participant, confirming their willingness to take part in the research.

3.11.2. Developing Rapport

According to Knight (2009), the ability to interact with individuals and establish a connection in a way that cultivates trust and understanding is termed as rapport. Additionally, it involves the mutual respect and dignity for alternative perspectives. The researcher established a rapport with the representatives of pharmaceutical companies by communicating with them, and they were completely briefed about the data collection methods.

3.11.3. Explanation of the Process to the Participants

A brief explanation of the strategy and tools was given to each participant in the study. Furthermore, they were also apprised with a detailed description of the interview including structure, purpose, duration, and types of questions. Moreover, they were made aware of the recording process, ensuring the confidentiality of their data.

3.11.4. Right of Withdrawal

The researcher ensured that the participants were informed about their right to withdraw from the study at any stage without any consequences if they expressed a desire to discontinue.

3.11.5. Privacy

Secrecy and anonymity were considered fundamental principles in the successful execution of the research. Additionally, the confidentiality of the data was also ensured. The national-level Participants were labelled as P/1, P/2, P/3 and the multination participants were labelled as P/4, P/5, and P/6.

3.12. Chapter Summary

In this chapter, a comprehensive exposition of the study's methodology has been meticulously delineated. Extensive coverage has been afforded to the elucidation of the research design and methodology, substantiated by pertinent references. Furthermore, the tools employed for research, as well as the methodologies deployed for data collection and subsequent analysis, have been expounded. The intricate processes associated with the development of the interview guide have also been addressed. Collectively, this chapter offers a thorough portrayal of the study's methodological underpinnings, rendering a lucid description of the research methodology employed in this investigation.

CHAPTER 4

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

In the preceding chapter, the framework and systematic procedural approach supporting the current study is thoroughly explicated and implemented. In this chapter, the researcher proceeds to conduct an inclusive and meticulous examination of the data collected, following the designated methodology. Finally, the researcher embarks on conducting analysis of the collected data and discusses it using qualitative and quantitative approaches.

4.2 Structure of Data Analysis

Taking into account the intricacy of the current study that involves two distinct data collection methods, the data analysis is also conducted in two distinct phases i.e. the first phase comprises a quantitative analysis using the method of content analysis where the word formation processes were analyzed and quantitatively presented to answer the first and second questions. Moreover, the second phase involves a thematic analysis of the semi-structured interviews conducted with the selected national and multinational pharmaceutical industries to answer the third question of the study.

4.3. Data Presentation

The trade names of the national and multinational pharmaceutical companies were analyzed for answering question 1 and 2 of this research. A total of 150 trade names were collected for the analysis. These trade names were then analyzed for their formation and composition using word formation processes i.e., coinage, clipping, borrowing, blending, acronym/ initialism, reduplication, compounding, and derivation. Out of the total 150 words, it was found that 42 trade names were formed by the process of blending, while 50 were completely invented (coinage) names. The researcher also noted that 15 trade names were created through clipping, and 6 were made by derivation i.e. adding suffixes or prefixes. Furthermore, 3 trade names were formed by compounding and 1 was created through initialism. There were also 13 trade names that entailed different methods, and 20 trade names were exactly the same as their generic names. However, it was also revealed that the processes of borrowing and reduplication

were not found at all in the trade names, since they were not present in any of the trade names.

Table 1

Word Formation Processes Found in the Trade Names

S.no.	Word Formation Processes	No. of occurrence
01	Coinage	50
02	Blending	42
03	Clipping	15
04	Derivation	06
05	Compounding	03
06	Acronym/Initialism	01
07	Borrowing	00
08	Reduplication	00
09	Other processes	13
10	Trade names same as generic names	20

4.4. Word formation Processes Encountered in the Trade Names

The trade names have been arranged under the headings of major word formation processes they underwent.

4.4.1. Coinage

In the current study, 50 trade names were considered as coinages because they were entirely newly invented trade names without having any particular phenomenon of formation. According to O'Grady and Archibald (2016), coinage refers to the creation of the completely new terms that do not previously exist in a language. The 50

trade names in the current study were categorized as coinage because they were originally invented names with no previous usage, roots, and origins in the already existing vocabulary. These trade names included Atarax, Brodin, Calpol, Capoten, Ciprin, Coreg, Cova, Diodex, Dyazide, Feldene, Flagyl, Flopen, Frecid, Fortum, Incruse, Inspra, Kaphalexin, Lenwin, Maxolon, Midlisin, Migril, Mogel, Midlisin, Nervin, Nexum, Opox, Paiko, Pebtrin, Pramest, Piriton, Rukobia, Septrin, Sivab, Tabak, Tasmi, Ultiva, Velosef, Valtrex, Wizen, Xanax, Xeticam, Xyzal, Zajula, Zentel, Zantac, Zoldap, Zopium, Zinar, Zyloric and Zyrtec. All these names were entirely newly invented for the pharmaceutical drugs so they fell under the process of coinage. O'Grady and Archibald (2016), also endorsed coinage as the most productive and useful process in the naming of the products.

4.4.2. Blending

O'Grady and Archibald (2016) say that in English language, blending occurs when the beginning of one word and the end of another are combined to create a new word. This study has identified 42 drug names that were created through the process of blending. It has been noted that a significant number of drug names that were formed through the process of blending, usually combined the generic names with the names of the manufacturing pharmaceutical company. In the study conducted by Pamungkas and Abdulah (2017), blending showed that company name always constitutes the first part of the trade name. But, in the current study, it was noticeable that the order of the company name and the generic name varied. Sometimes the part of the name of the company constituted the first part of the pharmaceutical trade name and in some cases the part of the generic name composed the first of the trade name.

Combining the name of the pharmaceutical company with the generic name of the drug increases recognition of company, also endorsed by Pamungkas and Abdulah (2017). It may also use to maintain the identity of the drug making the trade name easier for pharmaceutical professionals as well as consumers to associate the drug with a manufacturing pharmaceutical company. As far as the merging of generic name is concerned, if the trade name of the drug involves the part of the generic name, the healthcare professionals can easily recognize the main salt used in that particular drug and then they can easily identify the uses of that pharmaceutical drug just looking at

the trade name. It may also be done because generic names are globally accepted and recognized.

Moreover, the generic names of the drugs are scientifically based as well as difficult to pronounce, and usually are longer than trade names, making them difficult to remember. The pharmaceutical companies employ blending and form new trade names, the newly created trade names are usually shorter than generic names and easier to recall and pronounce (Pamungkas & Abdulah, 2017).

However, as far as the process of blending was concerned, the researcher found a few trade names that followed the process of blending proposed by O'Grady and Archibald (2016). The theoretical framework of the present study defines blending as taking the beginning of one word and joining it to the end of another word.

4.4.2.1. Combining One's Beginning with the Ending of Another Word

Some of the examples of trade names of pharmaceutical drugs are given below that followed the linguistically established process of blending by combining the beginning of the company name with the ending of the generic name.

Metpride

Levosulpride is the generic name of the trade name metpride. The trade name is formed through the process of blending. The first part of the name is taken from the initial syllable of the name of the company (Metro) and the second part is taken from the generic name of the drug (pride). Both are combined to make a new trade name "Metpride". The first part that is taken from name of pharmaceutical company is used here to maintain the manufacturer's recognition, and the part of active ingredient "Pride" indicates that the product is a formulation of levosulpiride that makes health professionals understand the purpose and uses of the drug.

Mefen

Mefen is a trade name for the drug Ibuprofen. The first syllable "me" of "mefen" may have been taken from the company name "metro", while the second part "fen" taken from the generic name "Ibuprofen." The combination of these two parts using blending creates a new trade name that is unique, short and memorable. Bryan (2015) states that the ibuprofen is an active ingredient in the medications used to mitigate fever and pain and presence of "fen" as the final part of a trade name indicates it as a pain

reliever. Other instances include Brufen, Diclofen, and Nurofen. In this way, the trade name mefen also indicates that it is a pain-relieving drug.

Getformin

The tablet Getformin is composed of two major ingredients i.e. glimepiride and metformin HCl. The trade name is created combining the company "get" (excluding z from "Getz") with the part of generic name "formin". This trade name also indicated the active ingredient used in the formation of drug. Thus through this name, people could easily get to know the pharmaceutical company this drug belonged to and it also became easier to understand the uses of medication by recognizing the active ingredient used in it.

Additionally, the drug names were not limited to a single type of blending; but they were created using different patterns of blending. It was prominent in the current study that the trade names were not created only by taking the initial part of one word and joining it to the final part of another word but they also applied different patterns. Below are the examples of other patterns of blending the researcher identified in the sample of the current study. Along with this, the researcher also interpreted the purposes behind these unusual patterns.

4.4.2.2. Combining Beginning of Two Different Words

This process of blending occurred by taking the beginning of the one word and joining it also with the beginning of another word.

Claramet

Claramet is a commonly prescribed antibiotic for treating various infectious diseases. The generic name for this drug is clarithromycin. Interestingly, the trade name "Claramet" is formed through blending two words, "Clara" and "met." The first part of the name "Clara" is taken from the generic name "Clarathromycin" while "met" is taken from the name of the company that manufactures the drug "metro". So, the process of blending noted here is taking the beginning of one word to constitute the first part of the trade name and joining it also to the beginning of another word to constitute the second part of the trade name. Although the pharmaceutical company blended generic name of the drug with company name using this unusual pattern of blending where it

was possible for the industry to come up with a different, unique and catchy name that did not exist before.

Amclav

The drug Amclav is made up of “amoxicillin trihydrate” and “clavulanate potassium.” As far as the trade name is concerned the first syllable of trade name “am” has been taken from the first part of the word “amoxicillin” and second part of the trade name “clav” has also been taken from the first part of “Clavulanate” to make a simpler and shorter name for commercial trading. Here, Gantner et al. (2002) justified that the names of the active ingredients used in this medication are compound words that are too lengthy and harder to pronounce and even recall. So, the pharmaceutical company extracted the first parts of both compounds and merge them together to make a unique, easy, short, and catchy trade name that was also easy to recall and remember.

Lamomet

The trade name Lamomet has been created by putting together the beginning of the generic name of the drug “lamo” from lamotrigine with the beginning of pharmaceutical company name “met” from “Metro”. Incorporating the company name in the trade name enhanced brand recognition to build trust and loyalty among consumers about manufacturer. The resulting trade name is typically easier and shorter, making it more straightforward for medical personnel and patients to recall as well as pronounce. Gantner et al. (2002) expounded in his study that the simplicity and uniqueness of trade name reduce the risk of medication errors and increase the likelihood that the drug will be correctly prescribed and easily identified.

Lastly, such a name that combine generic name and company name subtly indicate the drug's composition, providing a useful hint about its active ingredient and the manufacturer, which is informative for both healthcare professionals as well as patients (Pamungkas & Abdulah, 2017).

However, there were cases where the pharmaceutical trade names were not confined to combining only parts of words. Sometimes, they combined a full word with a half part of another word. In this regard, the researcher noted that the name of the pharmaceutical company was always taken in full either constituting the first or second part of the trade name, but the other word was always taken in half either its first or

second half. As far as the intent behind such sort of blending was concerned, it seemed that pharmaceutical companies formed these types of trade names because they were more interested to enhance their brand recognition. In such cases, a trade name fully incorporated the name of the pharmaceutical company. Some of the examples are given below to justify the stance.

4.4.4.3. Combining Full Company Name with the Beginning of Another Word

As mentioned earlier, the full name of the pharmaceutical industry was blended with the first or final part of the other word to make a new trade name. Here are few examples where the full company name was combined with the first part of the generic names or other blended words.

Metromoxi

Metromoxi is the trade name of antibiotic drug that has generic name moxifloxacin. However, the trade name Metromoxi combined the name of the manufacturing company "Metro" with the beginning of the generic name "moxi" using the process of blending. It was noticeable in the trade name that the full company name constituted the beginning, followed by the first part of the generic name. This indicated that manufacturing pharmaceutical industry had given more preference to its own name in the trade name with the intention to highlight and enhance its own recognition. As stated by Pamungkas and Abdulah (2017), combining company name often usually a sense of superiority, popularity, and excellence, and of the company behind the products.

Terbipearl

The trade name terbipearl is created combining "terbi" with "pearl". The first part of the trade name "terbi" has been taken from the generic name "terbinafine" and combined it with the name of the manufacturing company "Pearl". So, the newly created name followed the process of blending. This unique blend of the generic name with pharmaceutical company name indicated the active ingredient used in the manufacturing of this drug, thereby suggesting the uses of the drug. Pamungkas and Abdulah (2017) also endorsed that sometimes, the process of blending is applied in the pharmaceutical trade names to portray the use of drugs.

Scabipearl

The Scabipearl is the trade name of the drug that is used for the treatment of scabies. The word "Scabi" refers to scabies that is a skin disease. The trade name Scabipearl is created through the process of blending by joining scabi taken from scabies with the name of the manufacturing company (pearl). Firstly, through this name, it was emphasized that this drug is used for the treatment of scabies. Secondly, the blend of company name indicated the pharmaceutical company the drug belonged.

4.4.4.4. Combining Full Company Name with the Ending of Another Word

Here are few examples where the full name of company was combined with the final part of the generic names.

Metrozole

The trade name Metrozole is a trade name for the generic name metronidazole, which is developed by combining the name of the pharmaceutical company, “Metro” with the final part of the generic name “zole” taken from metronidazole. Thus the process of blending has been employed by combining the company name and final part of the generic name to create new trade name. In the pharmaceutical sector, the names ending with the suffix “zole” usually indicate the drugs that belong to the category of proton pump inhibitors (PPIs) or antifungals (Carmo et al., 2023). Other examples include fluconazole, ketoconazole and omeprazole, also end with “zole” indicating that these drugs are used to treat fungal infection. Therefore, the blend of zole in the trade name “metrozole” also aimed to define drug category that served the function of antifungal medication whereas combining the name of company aimed to highlight the identity with which the drug belonged to.

Metrocam

The trade name Metrocam also known by its generic name meloxicam formed through the process of blending. The process of blending occurred by taking the name of the company and joining it with the final syllable of the generic name. Friderichs et al. (2007) discuss the use of analgesics and antipyretics in their study. It was noted in their study that the suffix “cam” is associated with the drugs that are typically used to relieve pain and inflammation such as Piroxicam and Tenoxicam. In the current study, the first part of the trade name, “metro” derived from the name of the pharmaceutical company to maintain manufacturer’s identity while the second part of the trade name,

“cam” was the final syllable of the generic name “meloxicam” to indicate that the drug belonged to the pain-relieving category.

Furthermore, the process of blending was not confined to only combining the manufacturing company name with the generic names but pharmaceutical trade names also combined the name of the manufacturing pharmaceutical company with such words that conveyed the purpose or use of that particular drug. It may be said that such combination of words to create new trade names can also be helpful to identify the use of drug and the company it belongs to. Pamungkas and Abdulah (2017) also highlighted such type of blending in their study where the blended words conveyed the indications of drugs. Some of the examples from present study are given below:

Werilax

Werilax is a trade name of the drug formed by combining two segments of certain words: “weri” extracted from the name of the manufacturing company “Werrick” and “lax” that indicated the function of relaxing abdominal muscles. Therefore, the first part of the trade name “weri” linked the drug to its identity (pharmaceutical company), while “lax” conveyed its function of relaxing muscle tension in the abdomen, indicating the therapeutic use of the drug.

Lipiget

The drug Lipiget is used as an anti-lipidemic drug. The trade name “lipiget” is designed to indicate its relevance to lipid. The process of blending was involved in the formation of trade name taking “lipi” from "lipid” as the first part of the trade name and combining it with "get from “Getz”, the pharmaceutical company responsible for the drug, but excluded the “z” in the trade name. This trade name showed its relevance to lipid-lowering agents or antilipemic drugs. Thus, this name showed the category of the drug as well as its function. Combining the name of the company maintained its identity (manufacturer).

It was also noticed in some cases that two words or sometimes their parts were merged together that were neither the company name nor the generic name, but their combination still defined the drug's purpose and use.

Skelgesic

The trade name Skelgesic is a combination of two elements that relate to the drug's usage. This drug is used as an analgesic (pain reliever) that subsides the muscular pain. Taking the first part of the word skeleton and joining it to the second part of analgesic created a unique trade name skelgesic that not only defined the function of the drug but also made it simple, catchy and easy to remember. Thus, in this trade name the process of blending was used to define the function of the drug as skeletal pain-reliever.

Sologesic

The trade name "Sologesic" is also the combination of two elements that describes the property of the drug. The drug is used as pain relieving medication. Solo means independent or alone and analgesic means the reliever of pain. Combining the word solo with the final part of analgesic created a unique trade name that indicated the category of drug (analgesic). The blend of word solo conveyed its quality that this medicine is sufficient to relieve pain.

Peptiban

The drug Peptiban treats peptic/gastric ulcers. The trade name Peptiban is a blend of peptic and ban. In the trade name peptiban, ‘Pepti’ suggested that the drug treats the gastric issues and “ban” conveys prohibition or stop. Unanimously the blend of certain words conveyed the prevention of gastric ulcer promotion.

The above examples showed different patterns of blending the pharmaceutical companies used to make their names unique, memorable and distinctive.

4.4.4. Clipping

According to O’Grady and Archibald (2016), clipping is a linguistic phenomenon where a word is shortened by cutting off one or more parts of it, such as the front, middle, or end of the word. Clipping is a common strategy used to create short and memorable words. In a sample of 150 drug names, clipping was found in 15 trade names.

It is evident from the definition of O’Grady and Archibald (2016) that the process of clipping encapsulates cutting and shortening of words. Therefore, the purpose of clipping while forming new trade names may be due to the fact that generic names of medicines are usually very lengthy and difficult as well. They usually consist of compound words, making it challenging even for pharmaceutical professionals to

remember and recall millions of generic names (Gangwal & Gangwal, 2011). Thus, the trade name for a drug is compulsory.

Gantner et al. (2002) state that the trade name must be short, catchy, easy to say and recall. This is only possible when the word is shortened, making it easier to remember. Therefore, the process of truncation in the pharmaceutical sector was done to fulfill DRAP's requirements and also to create short and easy trade names. Here are different types of clipping with some examples.

Tipra

The generic name of the drug “tipra” is “tipramate”. The drug name tipra was created through the process of back-clipping. The process of clipping was employed by removing the final (mate) part of the generic name. Thus the newly created name was short, easy to pronounce and remember. But it was evident that the purpose of shortening a generic name to make a new trade name was not only to make it short and catchy but also it maintained the drug identity. Although in this trade name, the generic name was clipped but any person with a medical background could immediately guess the generic name, this truncated version belonged to. And thus, they may definitely know the uses of the drug as well. The stems of generic names help healthcare workers to identify the medication from its name (Williamson, 2013).

Pregab

Clipping was used as the word formation process to create the trade name “Pregab”. The trade name pregab was the clipped version of the generic name “Pregabalin”. In the trade name the process of clipping was employed by cutting the final part from the generic name “Pregabalin”. Thus, this name came into being through the process of back-clipping. Since the trade name pregab was the short form of pregabalin so it was easy to pronounce as well as remember.

Cardiovasc

Cardiovasc as a trade name of the medication was formed through the process of clipping. The trade name clearly indicated itself the category of drug because the word “cardio” is usually used for heart. Cardiovasc was found as the clipped version of the word cardiovascular that is related to the heart and blood vessels. The trade name obviously described the relevance of this particular drug to the heart. The process of

clipping involved cutting off the final “ular” from “cardiovascular” resulted in a concise name. The process found there was termed as back-clipping because the final syllable was truncated.

The above examples explained the process of back-clipping. However, in the process of mid-clipping, typically the middle part of a word is highlighted as proposed by Yule (2010) and O’Grady and Archibald (2016). But in the current study, the middle part was clipped and the remaining beginning and ending parts were merged together to create a new trade name. This finding suggested a different phenomenon where a unique sort of clipping was revealed by cutting out the middle part and then blending the remaining parts of the same word, potentially aimed to create a more aesthetically pleasing trade name of the drug. Here are the few examples where the middle part of the generic names was clipped and other remaining parts were joined together.

Lispril

Lispril, a trade name was derived from its generic name lisinopril. The trade name lispril was formed through the process of clipping. The middle part of the generic name “ino” was removed to create a shorter trade name. In this trade name, the researcher noticed a nonconventional type of clipping where the middle part was truncated, and the remaining ones (first and final) were merged together to create a new trade name. In this way, it differs from the established practice of clipping proposed by O’Grady and Archibald (2016), that usually highlights the middle part by cutting the first and last.

Lincocin

The trade name lincocin was found as the clipped version of its generic name lincomycin. The process of clipping found here is cutting off the middle part of the generic name “my” to create a new trade name. Thus, the trade name lincocin was derived from its generic name. It was noted that clipping was primarily applied to shorten the generic name, aiming to make it easier to pronounce and recall.

In the current study, it was commonly noticed that generic names were typically clipped because remembering generic names is usually challenging.

Levoxacin

The trade name levoxacin was also found as the shorter version of its generic name levofloxacin. The process of clipping found here was cutting off the middle part of the generic name “flo” to create a new trade name. Thus, the trade name levoxacin was also derived from its generic name through the process of mid clipping.

4.4.5. Acronym/Initialism

An acronym/initialism is a type of word formation process in which a new word is created by taking the initial letters of a set of the words and combining them to form a new word. Typically, acronyms consist of capital letters. Out of a set of 150 drug names, it was observed that only one product name used an acronym formed by combining the initial letters of two words i.e. A-V.

This suggested that acronyms or initialisms were not used as a common practice in the pharmaceutical sector. There may be several reasons for this. First of all, initialisms and acronyms can create confusion and may lack the distinctiveness. Apart from this, they might not clearly indicate the drug's composition, purpose, or active ingredients. Additionally, they can lead to ambiguities and errors in the prescriptions, as several medical terminologies and abbreviations are already in use that can lead to potential confusion and overlap. Therefore, this process did not seem preferable as it does not meet the criteria of clarity, distinctiveness, and effectiveness of branding within the pharmaceutical sector.

A-V

A-V is a trade name composed of two chemicals, Amlodipine and Valsartan, which work together to achieve the desired therapeutic effects. While the chemical names of these compounds may be complex and difficult to remember, the brand name A-V was created using an acronymic process. By taking the initial letters of both chemicals and writing them in capital letters, this trade name was formed.

4.4.6. Compounding

According to O’Grady and Archibald (2016), compounding involves joining two or more words to form a new word. Out of 150 pharmaceutical trade names, compounding was present in only three trade names i.e. Survive plus, NewDay, and Cough go.

The process of compounding was much less found as compared to the other processes, i.e., clipping coinage, and blending. However, the trade names combined two different complete words that indicated the uses and purposes of the drug, or sometimes highlighted the quality of the product. Pamungkas and Abdulah (2017) also stated that compounding is used to convey the uses, functions and purposes of the drugs. A few examples from the current study are given below.

NewDay

The trade name "NewDay" for an antihypertensive tablet was created through the process of compounding. The combination of two separate words i.e. "New + day" conveyed a new and fresh start, which was likely intended to suggest that taking this pill could improve one's day, daily health, or overall well-being.

Survive plus

The trade name "Survive Plus" was also created by combining the word "survive" with the word "plus." The tablet "Survive Plus" was designed to reduce cholesterol; thus, this trade name implied that the product not only manages cholesterol levels but also provides additional health benefits that contribute to overall survival and well-being. Thus, the word formation process of compounding was used here to convey the positive aspect of drug.

Cough go

The trade name "Cough go" for an anti-cough syrup was designed through the process of compounding. The combination "Cough and Go" straightforwardly suggested its function that the product was designed to alleviate or stop coughing. Thus the purpose of compounding in this trade name was to convey the function of this particular medication.

4.4.7. Derivation

According to O'Grady and Archibald (2016), derivation is the creation of new words by adding an affix or multiple affixes to a word. As far as the current study was concerned, out of 150 pharmaceutical trade names, the process of derivation was found in six trade names. It was noticed that derivation was employed to design easy and memorable trade names that evoked positive feelings and beneficial impacts of drugs, making the drug more demanding. Pamungkas (2015) suggests that if the consumers

know the word formation in trade names, they can easily guess the purpose, use, and quality of drugs. The trade names created through the process of derivation suggested ease, relief, or efficiency of drugs. Here are a few examples of trade names in which the process of derivation was found.

Cozeal

The trade name “Cozeal” was created using the process of derivation. The core word “zeal” implied enthusiasm. So, it suggested a strong impact and effectiveness of the drug. The prefix “co” was added to denote a sense of enhancement. Therefore, the process of derivation was used to enhance the positive aspect of drug.

Flueze

The trade name "Flueze" was used in the treatment of flu. In the trade name, the base word was “flu” that was the clipped version of influenza. The suffix: “-eze” was added to the core part of the name to create a new word.

Inhalerin

In the trade name “Inhalerin”, both “er” and “in” worked as affixes added to the base word “inhale”. The word “inhale” means the act of taking breaths in. The suffix “er” indicated something that contributes to maintaining breathing. The suffix “in” was also added to the end of the word creating a unique name.

Regain-XR

The trade name “Regain-XR” was also created through the process of abbreviation and derivation. The core word “Regain” denoted restoration of strength, function, or health. The abbreviation “XR” was added as a suffix that stood for “Extended Release” a pharmaceutical abbreviation commonly used to indicate prolonged effect of active ingredient.

Softin

In the trade name “Softin” the base word “Soft” implied gentleness or ease. The combination of “soft” and the suffix “in” indicated that this drug provided gentle relief or has a soothing effect, reassuring users of its safety and effectiveness without being harsh.

4.4.8. Identical Trade and Generic Names

Out of 150 trade names, 20 names were found as having identical generic names and trade names. Interestingly, all these trade names were found within multinational companies. The reason for such practice could be supported by the fact that multinational industries operate not only at a local level but also on a global scale. As it was obvious in the study of Bryan (2015) that locally created trade names are not universally accepted, whereas generic names are globally recognized. Since multinational pharmaceutical companies operate on a broader level, they often used generic names as their trade names, especially for those drugs whose active ingredients were borrowed from abroad. It ensured that these drugs were universally recognizable. On the other hand, medications that were formulated nationally with local ingredients were given local trade names that were familiarized within the country, such as in Pakistan. The trade names that had identical generic and trade names included: Acetylcysteine, Adenosine, Aminophylline, Ampicillin, Atracurium besylate, Azithromycin, Aztreonam, Ciprofloxacin, Cisatracurium besylate, Daptomycin, Diazepam, Droperidol, Epinephrine, Erythromycin lactobionate, FentaConyl citrate, Fluconazole, Indomethacin, Ketorolac tromethamine, Levofloxacin, Meropenem.

4.4.9. Some Other Linguistic Processes

The word formation processes mentioned above were found in the trade naming of the pharmaceutical drugs through the lens of the theoretical framework employed by the researcher for the analysis. Alongside there were also other less common processes found within the trade names. Below are some instances demonstrating the other linguistic processes involved in the formation of trade names.

4.4.9.1. Graphological Deviation

Graphological deviation can be described as a deliberate departure from the standard writing conventions in terms of punctuation, spelling, capitalization, and fixed orthographic norms. The concept of graphological deviation was proposed by Leech (1969). The purpose of graphological deviation in trade naming was forming the trade name more unique and distinctive, making it stand out from its competitors. Here are a few examples of graphological deviation:

Rize

The graphological deviation in the trade name “rize” was observed as the result of the deviation from the standard spelling of the word “rise”. Despite the alteration in standard spelling, the trade name “rize” was similar in sound to “rise”, maintaining a connection to the original word. Thus, it could be said that this phonetic similarity assisted in retaining the positive connotations of the word “rise” such as growth, making it distinctive and unique. According to Yaghubyan (2020), the deliberate alteration of spelling in the trade names serve the purpose of uniqueness and distinctiveness.

Regulair

The trade name “Regulair” for a tablet was also formed using graphological deviation. In this trade name the standard spelling of the word “regular” was altered. This change in spelling created a distinctive and unique trade name that may also enhance visual appeal. Furthermore, the similarity of sound to “regular” conveyed the idea of consistency.

4.4.9.2. Anagram

According to Saussure (1906), an anagram is a linguistic term used to describe a word that is formed by rearranging the alphabetical letters of a word. This process is accomplished by writing down all the letters in the actual arrangement of the original word then the letters are rearranged to create novel words. If the new word is valid and meaningful then it is called an anagram whereas if the new word does not make sense then it is termed as nonsense anagram or gibberish anagram.

This process involved simple rearrangement of letters to create new words. However, in the present study it was noticed that the letters were not only rearranged but also underwent many transformations to form entirely new trade names. Consequently, the researcher termed this newly discovered process as “complex anagramming” because there was no single, widely recognized linguistic term that encompassed all the steps the researcher found in the current study. However, Yule (2010) used the term “multiple processes” for such mechanism. Here are the few examples that involved this process.

Nimixa

The generic name of the drug “nimixa” was “rifaximin”. The trade name nimixa was found as the transformation of its generic name “rifaximin”. This trade name

involved several intricate steps. Firstly, the process began with truncation, where the beginning of generic name “rif” was clipped from the original word “rifaximin”. After clipping, the remaining part of the generic name was “aximin”. Then the technique of reversal was employed where the remaining part of the generic name “aximin” was reversed to form “nimixa”. Although “nimixa” itself did not make sense but it was adjusted to create an easily pronounceable trade name that sounded aesthetically pleasing and maintained a certain level of phonetic cohesion. Thus, this nonconventional combination of clipping and reversal resulted in “nimixa,” a new trade name.

Ximcef

The transformation of generic name “cefixime” into "ximcef" also involved multiple steps. Clipping and rearrangement were involved to create a new trade name. The process started with clipping, where middle “i” and final “e” were removed from the generic name “cefixime”. After clipping, the next step was rearrangement or anagramming. In this step, the letters from “cef” and “xim” were reordered to create a new sequence. This rearrangement aimed at producing a sequence that was easily pronounceable and appealing.

Moving the current study forward, after exploring the word formation processes encountered in the trade naming of both national and multinational pharmaceutical companies, it was aimed to conduct a comparative analysis between the pharmaceutical industries of Pakistan to address the second research question of the current study.

4.5. Comparison of National and Multinational Pharmaceutical Companies

Since this study was about the formation of the trade names of pharmaceutical drugs, it also encapsulated a comparison of pharmaceutical industries at the national and multinational levels to determine the differences and similarities in the naming practices at both levels of pharmaceutical companies in Pakistan. To carry out this comparison successfully and answer the second question, the researcher measured the frequency of occurrence of different word formation processes at both levels. The following table presents the frequency of word formation processes observed in the trade naming of Pakistani national and multinational pharmaceutical companies.

Table 2

Comparison of National and Multinational Pharmaceuticals

S.no.	Word formation processes	National		Multinational	
		***f* rate**	***f* %**	***f* rate**	***f* %**
01	Coinage	18	24.00	32	42.67
02	Blending	27	36.00	15	20.00
03	Clipping	11	14.67	04	5.33
04	Derivation	05	06.67	01	1.33
05	Compounding	03	04.00	Nil	0.00
06	Acronym/Initialism	01	1.33	Nil	0.00
07	Reduplication	Nil	0.00	Nil	0.00
08	Borrowing	Nil	0.00	Nil	0.00
09	Other processes	10	13.33	03	4.00
10	Identical trade and generic names	Nil	0.00	20	26.67

The frequency distribution in table 4.2 revealed distinct word formation processes in the trade naming at the national and multinational pharmaceutical levels within Pakistan. Here is the detailed discussion on the comparison of national and multinational pharmaceutical levels on the basis of word formation processes to delineate how they differed from one another in their naming practices.

4.5.1. Coinage

Coinage occurred in 18 trade names and constituted 24.00% of the total names at the national pharmaceutical level in Pakistan. Whereas it was noticeable at the multinational level as the most frequently used process, with 32 occurrences that

constituted 42.67% of the total names. It was evident that both levels recognized the value of constructing unique and original trade names to fulfill the requirement of distinctiveness set by the regulatory authority. But the high percentage in multinational level indicated a strong inclination of multinational companies towards inventing entirely new trade names. A major reason for the abundant use of coinage in the trade names at both levels may be that no particular framework has been clearly suggested to them in terms of trade naming of their pharmaceutical drugs. Consequently, both national and multinational industries strived to create unique trade names for their products by coining completely new words that did not previously exist.

4.5.2. Blending

At the national level, the process of blending emerged as the most commonly employed process encountered in 27 trade names that equated to 36.00% of the total trade names. On the other hand, at the multinational level blending occurred in 15 trade names that constituted 20.00% of total cases. This discrepancy in frequency evidently suggested that combining parts of words to create new and innovative names was preferred more by national pharmaceutical companies than multinational companies. The major reason may be that blending allows companies to produce names that are not only distinctive but also convey a sense of familiarity or connection to existing terms, making the trade names more relatable to drugs. In this way, blending can also help create names that are memorable or suggestive of the drug's function or benefits.

4.5.3. Clipping

Clipping appeared in 11 names and encapsulated 14.67% of total trade names at national level that was used to create concise and easily recognizable trade names. At multinational level it appeared in 4 trade names that constituted 5.33%. This process created concise, easily recognizable names that were practical in a medical context where brevity, clarity, simplicity, and memorability were important. By shortening existing words, pharmaceutical companies created names that were easy to pronounce, recall, and recognize, which can be crucial in the medical field where clarity and precision are paramount. Clipping might be particularly favored for drugs that require quick identification and recall.

4.5.4. Derivation

Derivation occurred in five names that constituted 6.67% of total trade names of national pharmaceutical companies. This process involved adding affixes to existing words, thereby creating names that might suggest the nature or function of the drug. So, this approach added a layer of meaning to the name, helping to communicate the drug's purpose or origin. Whereas at the multinational level, this process occurred in just one trade name that counted 1.33% of the total trade names. This low frequency suggested that while this process can add meaning or context to a name by indicating function, purpose, or origin of drugs, it was still less favored compared to more innovative processes like coinage or blending. However, derivation can effectively communicate a drug's function or origin.

4.5.5. Compounding

At the national level of pharmaceuticals, compounding was seen in three trade names encapsulated 4.00% of total cases. Since this method allows for the creation of descriptive and informative names, which can often provide insights into the drug's use or composition, but its less frequent usage suggested the slight inclination of national pharmaceutical sector towards this word formation process. On the other hand, at multinational level, it was completely absent in this dataset, constituting a frequency of 0.00%. The lack of compounding (the combination of two full words) may indicate that multinational companies prefer more streamlined or novel naming process, i.e., coinage.

4.5.6. Acronym/Initialism

Acronym/Initialism was relatively rare, occurring in just 1 pharmaceutical trade name at national pharmaceutical level constituting 1.33% of the total instances. This likely reflected a cautious technique to ensure clarity and avoid confusion in drug names. In multinational companies it was completely absent in the data sample, hence constituted the frequency of 0.00%. It indicated a minimal or no reliance of pharmaceutical industries on abbreviations in the trade naming. This could be due to the potential for confusion, because accuracy and clarity are vital prerequisites in the pharmaceutical field.

4.5.7. Total Absence of Reduplication and Borrowing Processes

It was also noted that certain word formation processes like reduplication and borrowing were completely absent at both the national and multinational levels, with a frequency of 0.00% suggesting that these processes were not utilized by pharmaceutical companies in Pakistan. This notable absence suggested that both national and multinational pharmaceutical companies did not favor repetitive patterns of words or the direct adoption of foreign terms in the trade naming of their drugs. This could be due to the desire to create uniquely local trade names that resonate with the domestic market. Moreover, the notable absence of these processes also suggested that these companies might not have had familiarity with either of these word formation processes that led to their absence in all instances of the samples.

4.5.8. Identical Trade and Generic Names

There were no instances of identical trade and generic names at the national pharmaceutical level in Pakistan. This highlighted that the national pharmaceutical industries maintained clear distinction between trade names and their generic counterparts. One major reason for this could have been that national pharmaceutical companies did not participate in drug export or import: their manufactured drugs were usually used only within their local country. As generic names were scientifically based and usually complex and long, they were difficult to remember as well. Therefore, national pharmaceuticals preferred to create their own local trade names, which were shorter and easier to remember. So, the generic names were not preferred over trade names by these companies.

On the other hand, at the multinational pharmaceutical level, it was particularly interesting to note the relatively high frequency of identical trade and generic names which occurred in 20 trade names that constituted 26.67% of the total names. This suggested that multinational pharmaceuticals significantly used the similar name for both the trade name and its generic counterpart. As multinational pharmaceuticals participated in export and import activities at global level and primarily used foreign APIs (Active Pharmaceutical ingredients) in the formulation of drugs therefore, their products were more broadly recognizable across various markets. Generic name of the drug is globally recognizable and acceptable so they preferred to use similar generic

and trade names for their drugs. This was the key reason that these pharmaceuticals often opted to use identical trade and generic names for the drugs they manufactured.

4.5.9. Other Processes

Some other linguistic processes i.e. graphological deviation and anagram were also noted in 10 trade names at national pharmaceutical level and in 3 instances at multinational level that constituted 13.33% and 4.00% of total names respectively. It indicated their willingness to explore unconventional and innovative methods of trade naming. Although, these linguistic processes were not part of the theoretical framework selected for the current study, but the researcher found them in the trade naming of Pakistani pharmaceuticals at both levels.

4.5.10. Differences between National and Multinational Trade Naming

In the light of the above-mentioned comparison, the researcher observed the key differences at both pharmaceutical levels, which were as follows:

The process of coinage accounted for 24.00% of trade names in national pharmaceuticals and 42.67% in multinational companies. The process of blending constituted 36.00% in national whereas 20.00% in multinational pharmaceuticals. These findings highlighted that coinage was more dominant in multinational level while blending was more prominently observed in national pharmaceuticals. The presence of coinage at multinational level pharmaceuticals highlighted that they recognized the significance of creating original and unique trade names that could enhance their identity and recall. So, they preferred to create entirely new trade names that did not previously exist. Furthermore, national companies preferred the process of blending as a creative way to form trade names to enhance their recognition by merging company name and generic name of drugs, while multinational companies leaned towards more straightforward processes of coinage to create completely novel words.

Clipping was seen at 14.67% in national pharmaceuticals whereas in multinational companies it appeared in only 5.33%. This indicated that national companies utilized the process of clipping more than multinational companies to create easy, unique, shorter, and catchy names memorable and appealing to local consumers, while multinationals showed a slight inclination for this process to create their trade names more distinctly.

Derivation was significantly less frequent in national pharmaceuticals with only 1.33%, whereas it accounted for 6.67% at multinational level. It showed that national pharmaceutical might not be familiar with the process of derivation, while multinational companies might opt it for more unique names that stood out globally conveying unique meanings within them.

There was 0.00% occurrence of identical trade and generic names in national pharmaceuticals which showed their no preference for this approach. While at Multinational level, identical trade names appeared in 26.67% of total trade names. Since multinational companies engaged in export and import at global level so they used identical names for both trade and generic names to reinforce their recognition at broader level, ensuring consistency across various pharmaceutical markets, while national pharmaceuticals might avoid this practice to differentiate themselves more distinctly, avoid complexity in trade naming, and make their names easy, short and memorable.

To sum up, both national and multinational pharmaceuticals value innovation, originality, and differentiation to make distinct and memorable trade names but the specific word formation processes and strategies they adopted could vary significantly based on their objectives and context. Coinage was found as a common process at multinational level, indicating a commitment to original, unique and entirely new trade naming, while blending was more favored by national pharmaceuticals to enhance their brand image. Furthermore, the significant use of identical trade and generic names at the multinational pharmaceuticals indicated their aim to enhance recognition at global level, which contrasted with the national pharmaceuticals' approach to maintaining uniqueness and recognition at local level. Moreover, the absence of reduplication and borrowing indicated a shared concern on making distinctive trade names. This reflected a deliberate effort to create unique and original trade names rather than relying on repetition of existing words in other languages.

4.6. Data Analysis of the Interviews

This section corresponds to the third question of the study that aimed to understand the perspectives of pharmaceutical industries regarding word formation processes (WFPs) both at local and multinational levels. It also examines and discusses how the pharmaceutical sector of Pakistan at national and multinational levels

approaches the creation of trade names of drugs, focusing on the linguistic and regulatory considerations that influence their choices. For this, the interviews were designed by the researcher to uncover the underlying perspectives and strategies employed in the trade naming of pharmaceutical drugs. The national level participants were labelled as P/1, P/2, and P/3 and the multination participants were labelled as P/4, P/5, and P/6 to maintain privacy.

Since the data in this study was collected through semi-structured interviews with participants from pharmaceutical companies, a qualitative content analysis approach was considered most appropriate for interpreting the transcripts of the interviews. This method allows for a systematic, objective, and replicable process to condense large amounts of verbal data into meaningful themes. Coding was done identifying recurring ideas, terms, and expressions in the participants' responses, which were then grouped into categories. These categories are further refined and interpreted to derive broader themes that reflect patterns of thought, behavior, or challenges experienced by the participants.

Pakistani national and multinational pharmaceutical companies depend on DRAP for regulatory approval of the trade names of their drugs. So, it was also crucial to decipher the perspective regarding the trade naming of pharmaceutical drugs both at national and multinational levels for a comprehensive understanding of the trade naming phenomenon.

In this regard, the researcher attempted to investigate from the participants of both national and multinational companies that if the regulatory authority of Pakistani pharmaceutical sector recommends any processes that can assist the companies in the creation of trade names of their pharmaceutical drugs. The subsequent section showcases the views shared by the participants of the interviews.

4.6.1. Unavailability of the Standard Processes for the Trade Naming

Upon investigation, it was the consistent response of P/1, P/2 and P/3 from national participants and P/4, P/5, and P/6 from the multinational pharmaceutical industries, that "the regulatory authority does not recommend them any set standards or defined processes for the formation of their trade names". This unanimous feedback highlighted that there was no established criterion for trade naming of pharmaceutical drugs that clearly indicated the inconsistent practices in the trade naming.

Furthermore, they also shared that even though DRAP does not recommend exact processes for naming however, they are explicitly instructed on what elements to keep in mind to avert many problems related to naming of the drugs. Their opinions suggested that guidelines and rules are given for regulatory compliance without the defined tools for creating trade names.

4.6.2. Regulatory Compliance and Guidelines for Trade Naming

Regulatory compliance here refers to standards, guidelines, and regulations devised by a governing body such as DRAP in Pakistan. These predefined guidelines were outlined by the participants of interviews from both national (P/1, P/2 & P/3) and multinational companies (P/4, P/5, & P/6) when they were asked for any processes recommended by Drug Regulatory Authority of Pakistan which they can use while creating trade names for their pharmaceutical drugs. In this regard, the views of participants from the national as well as multinational companies to this question were almost same. Following are the guidelines extracted from their responses to ensure the safety concerns.

4.6.2.1. The Pharmaceutical Trade Names Must be Unique, Distinct, Short, and Memorable

All the participants emphasized that regulatory body strictly instructs them to create unique and distinguishable trade names of the pharmaceutical drugs, not likely to create ambiguity with the existing names of other pharmaceutical products. This aims to avoid mix-ups with the other drugs. So, the trade names must be distinct in handwriting, print, or speech. To ensure this compliance, pharmaceutical companies mentioned several factors to consider while creating trade names, i.e., “the uses of the drug” (P/1, P/3, & P/5), “the population likely to use it” (P/2, P/4, & P/6), “the nature or form of the product” (P/2, P/4, & P/5), “the way of its administration” (P/1, P/2, P/3, P/4, P/5, and P/6), “the strengths and dosage of the drug” (P/1, P/2, P/3, P/4, P/5, and P/6), and “the situation or condition in which the drug is prescribed, used, and dispensed” (P/1, P/2, P/3, P/4, P/5, and P/6).

4.6.2.2. Trade Names Must not be Misleading in Any Way

The P/2, P/3, P/5 and P/6 stated that “the trade names of the pharmaceutical drugs must be devoid of any false or misleading pharmaceutical or therapeutic information”.

It means that the trade names should not contain such information that suggests inaccurate uses, qualities, and benefits of the drugs. For example, a name of a drug like "CureAll" could convey false implication of a universal treatment, leading to ambiguity in patients. These types of names could cause confusions among the users.

Besides this, P/3 and P/4 also mentioned that "the trade names should not contain bombastic terms, i.e., plus, ultra, pro, mega, max, etc". It highlighted that they were also recommended that trade names should not contain promotional, spiritual, comparative, or superlative implications within them.

4.7. Challenges faced by pharmaceutical Companies in the Trade Naming

According to P/1, P/2, P/3, P/4, P/5, and P/6, "the regulatory authority does not recommend to them any specific processes for the trade naming of their drugs but merely provides guidelines". Due to non-availability of any systematic approach for trade naming they employ random and irregular techniques to create new names. So, the participants reported that the crude practice of trade naming often leads to numerous challenges which they face while naming their drugs. In this regard, Williamson (2013) also conducted a study on OTC (Over the counter) medicines and concluded that creation of trade names is a difficult and challenging process because there is no true systematic approach of drug trade naming.

Following are the challenges they encounter in the course of the trade naming of pharmaceuticals.

4.7.1. Struggle to Meet Regulatory Compliance

The P/3 and P/4 mentioned that "they find it challenging to meet the regulatory prerequisites because they have no set standard processes or methods for trade naming." It indicated that they lack linguistic knowledge, which triggers the situation and makes it more challenging for them to create the names following the criteria devised by DRAP. Consequently, they struggle to meet regulatory compliance.

In the same context, Pires et al. (2015) evaluated 474 different Portuguese pharmaceutical trade names in order to determine whether or not they complied with regulation. They exposed that a significant proportion of names, 61.3%, did not comply with the instructions of regulatory agency of Nigeria. So, the response of the

participants in the current study confirmed that the problem is not new. It's an ongoing issue that needs to be resolved because pharmaceutical industries face the challenge to meet regulatory compliance due to the unavailability of the standard framework which causes problems for the producers as well as consumers.

4.7.2. Prolonged Duration Required for Trade Name Development

The P/2, and P/3 said that "the use of crude and random approaches consume a lot of time in the naming process." They regretfully underscored that creation of new names in such situations demands a considerable investment of time.

Whereas the P/5, and P/6 stated that they usually develop totally new trade names without adhering to any particular techniques. It showed their dependence on coinage that may require sufficient time for not always complying with regulatory prerequisites.

4.7.3. Problem of Look-Alike and Sound-Alike Trade Names

It was the opinion of the P/2, P/3, p/5, and p/6 that "the pharmaceutical companies name their drugs without using a structured approach, they often end up with trade names that resemble sound or look to already existing names." In this way, they usually fail to come up with unique names. Williamson (2013) endorsed in his study that if the trade names of the drugs are too similar, then they cause confusions. A doctor may prescribe the incorrect medication, worsening a patient's condition, or causing new detrimental consequences.

The job of the trade name developer is to create a unique name that is distinct from all other existing drug names so as not to mislead the pharmaceutical world.

4.7.4. Regulatory Rejections Leading to Delays in Market Entry

In the pharmaceutical sector, the approval of trade name is the most significant step in the process of drug discovery to dispensing. One of the significant challenges the pharmaceutical sector of Pakistan faces due to the unavailability of the standard processes is the recurrent rejections of trade names by regulatory authority due to the non-compliance. Collier (2014) stated that pharmaceutical industries often consume a vast span of time as well as a heavy amount of money in trade naming, yet their many proposed trade names for newly developed drug names are still rejected by regulators.

4.8. Familiarity with the Word Formation Processes

The sole purpose of the interviews was to ascertain the level of awareness and familiarity of pharmaceutical industries with the word formation processes. To explore this, the researcher designed some interview questions regarding word formation processes with the aim to evaluate their familiarity with the word formation processes and the degree to which they rely on them. This approach assisted the researcher to assess their perspectives of standard word formation processes.

4.8.1. Naming Strategies and Practices Used by Pharmaceutical Companies

The use of any specific processes or methods for the creation of new trade names was outrightly denied by both Pakistani national and multinational pharmaceutical industries but they did share some techniques. However, they emphasized that these techniques are applied occasionally rather than regularly.

4.8.1.1. National Level

The participants from the national level (P/1, P/2, & P/3) stated that they often create entirely new words to make their trade names different which must not match with the other names that already exist. It indicated the use of coinage in their trade naming.

They mentioned that they often, though not perpetually, combine two or more parts of different words that do not go typically together. They stated that “in this process we intentionally prefer to combine the name of company with another word”. Though it was obvious from their explanation that this phenomenon is termed as blending from the linguistic point of view, but they did not use the particular term like blend or blending. However, they mentioned that they do not rely solely on this process for trade naming of their drugs.

Furthermore, only p/2 from the national pharmaceutical industries stated that the process of combining two existing words together is often used to create new words. However, this particular term “compounding” was not mentioned by the participant for this specific process. The rest of the participants (P/1 & P/3) did not show concern for this process.

Moreover, the national level industries were not familiar with the term “clipping” but they explained the process. They mentioned that they usually shorten

long words to make names easy, short, and catchy. Additionally, clipping was also found in 11 of their trade names.

No participant from the national industries agreed that they employ the process of borrowing in the trade naming of their pharmaceuticals. This indicated that they do not prefer adopting existing words from other languages to make new trade names. They rely on internal creativity or novelty in the trade names over taking words from foreign languages. Furthermore, their response ("we do not prefer to taking word from other languages") to question about borrowing indicated that they did not have a comprehensive understanding of the exact process of linguistic borrowing, nor were they familiar with the linguistic concepts of borrowing like calque or loan translation.

Likewise, all the participants of national pharmaceutical industries denied the use of reduplication because they lacked complete awareness about the concept of reduplication.

In response to the question of derivation, it was noted that the participants were entirely unfamiliar with the technical term "derivation". However, after explaining the process of morphological derivation, the representatives from national level stated that they very often add small bits to the beginning or end of words. But this process was also found in their pharmaceutical trade names.

Although industries at the national level were familiar with the acronyms, but they did not prefer using them because they often lead to confusing and unclear names, making regulatory approval challenging. But it was found in one of their trade names.

Apart from this they also mentioned some other approaches. Sometimes they deliberately mispronounce or misspell already existing words to create new words. In linguistics these concepts are called linguistic deviation or graphological deviation.

They also stated that they often create new words by randomly altering letters, sounds, sequence of spellings, etc. to create entirely new words for quick approval. This process in linguistic terms is called anagramming but they did not use this term.

4.8.1.2. Multinational Level

The representatives from the multinational industries P/4, P/5, and P/6 showed their preference of making completely new trade names rather than relying on numerous random tricks and patterns. From the linguistic point of view, this process is termed as

coinage, but the exact term was not explicitly used by any of the participants. Coinage also appeared with the highest frequency in their trade names.

Furthermore, the P/4, P/5, and P/6 mentioned that “we usually prefer to combine either their company name with a generic name of the same drug or company name with the name of active pharmaceutical ingredient to create a new trade name”. The participants from multinational companies did not use the specific word blending. But it was found in 15 trade names of multinational industries.

The P/4, P/5, and P/6 also talked about the shortening of words. However, it was significantly noteworthy that they did not claim to create new trade names by cutting or shortening existing words. Instead, they mentioned to remove multiple parts and then combine them with the company name, or generic name that indicated their dependence on blending process. This showed their non-adherence to the standard or linguistically established process of clipping, nor did they talk about fore-clipping, mid-clipping, back-clipping, or complex clipping. Also, the process of clipping was found in just 4 names that confirmed its infrequent usage.

Likewise, none of the participants from P/4, P/5, and P/6 confirmed the use of compounding. It was also noted that they were neither aware of this process nor had they applied it in any of their drug names.

Converse to the national companies, the participants from multinational sector stated that they did not use the process of derivation regularly. They said that while following random techniques a word might occasionally be created by this process but they did not typically use this particular process in the creation of their pharmaceutical trade names. Derivation was observed in only one trade name, which could be considered as unintentional.

The use of completely acronyms/initialisms was negated by them. Although they were familiar with initialism, but they lacked knowledge of acronyms. None of their trade names exhibited these processes.

Furthermore, they also lacked knowledge of borrowing and reduplication. They also negated the use of such processes. These processes were also not found in any of their trade names. Instead of taking words from other languages, they told that

sometimes they use the generic names of the drugs as their trade names. The researcher found 20 trade names that had same generic and trade names.

4.9. Perspectives of Pharmaceutical Companies Regarding WFPs

The interviews conducted with representatives from both national and multinational pharmaceutical industries in Pakistan provided important insights regarding the phenomenon of the trade naming including the familiarity of pharmaceutical professionals with linguistic processes of word formation.

It was revealed through the interviews with the representatives of pharmaceutical industries that some processes are used infrequently at both national and multinational levels. They are not applied systematically or deliberately. For instance, the process of coinage i.e. creation of entirely new words was employed by both national and multinational pharmaceutical industries in Pakistan. However, neither of them was consciously cognizant of the linguistic term “coinage” or its systematic application. The lack of knowledge demonstrated that the naming strategies of Pakistani pharmaceutical sector are primarily intuitive than guided by linguistic concepts.

It was mentioned from the participants of both national and multinational industries that they employed the process of combining parts of different words. They explained the entire process of how they merge different parts of generic or chemical names with company names to make new trade names. Although they did not explicitly use the term “blending” but their descriptions clearly matched with this process. This was also a common process at both levels. However, various other types of blending were observed in the trade names, but the participants did not mention them. This suggests that these types were not intentionally or knowingly applied, but rather, were incorporated randomly.

Both the national as well as multinational level industries were not completely familiar with the other processes such as clipping, derivation, compounding, and acronyms/initialisms. These processes were somewhat used through intuition, randomness, or guessing techniques. Also they were neither familiar with nor used processes like borrowing and reduplication.

In short, there was a need for understanding at both levels so that they could systematically use these processes to make distinctive names and reduce challenges in trade naming.

CHAPTER 5

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

In the previous chapters, the researcher conducted a comprehensive study encapsulating the introduction, research methodology, data analysis, and interpretation. The current chapter primarily focuses on answering the research questions, presenting the study's findings, and also offering recommendations.

5.1. Summary

Since the study was related to word formation processes in which the researcher made a thorough effort to explore the word formation processes in the trade names of pharmaceutical drugs in Pakistan. The study was conducted across six pharmaceutical industries including three national and three multinational companies. The medical research is a vast field where discovery of drugs is a continuous process. Because of time constraints and the requirement to delimit the study, the researcher chose five particular drug categories from each selected company. To condense the data, the researcher further narrowed the study by choosing only five trade names from each drug category and examining the trade names of pharmaceuticals from the perspective of word formation processes to delineate the word formation processes employed in the trade names at both levels in Pakistan. In this way, a total of 150 trade names were analyzed, taking 75 from national and 75 from multinational pharmaceuticals.

In the first question, the researcher analyzed the chosen trade names of drugs from all the selected pharmaceuticals from the perspective of word formation processes. The researcher then addressed the second question, where a meticulous comparison was conducted between national and multinational pharmaceuticals to delineate the differences in the trade naming of national and multinational levels in Pakistan on the basis of word formation processes. By measuring the frequency and rate of occurrences of word formation processes, the researcher identified the differences and similarities between both levels.

In the third question, semi structured interviews were conducted by the researcher with the selected pharmaceutical industries to know their perspectives regarding word

formation processes. It was done with the objective to determine whether the pharmaceutical companies in Pakistan were familiar with the linguistically established word formation processes or if they employed them randomly or unknowingly. Also through interviews the researcher made an attempt to decipher whether the regulatory authority of Pakistan provided them a standard framework for trade naming. The researcher also aimed to explore the techniques they used to create names if no definite framework was provided to them. Furthermore, the researcher endeavored to collect and record all this information through the interviews for detailed and deeper analysis.

5.1.1. Answers to the Research Questions

Here is a brief answer to each research question to outline the findings the researcher concluded in the study.

To answer the first and second questions, the researcher examined the trade names of selected pharmaceuticals to note the specific word formation processes used in the trade names. Besides this, the frequency and rate of occurrence of word formation processes were also calculated.

The table below highlights that highlights the word formation processes observed in the pharmaceutical trade names. Additionally, it also exhibits the occurrence of each word formation process in the sample of the study.

Table 3

Word Formation Processes in the Trade Names of Pharmaceuticals

S.No.	Word formation process	No. of Occurrence	National	Multinational
01	Coinage	50	18	32
02	Blending	42	27	15
03	Clipping	15	11	04
04	Derivation	06	05	01
05	Compounding	03	03	00

06	Acronym/Initialism	01	01	00
07	Borrowing	00	00	00
08	Reduplication	00	00	00
09	Identical generic and trade names	20	00	20
10	Other processes	13	10	03

The researcher noted that the process of coinage was used abundantly by both national as well as multinational pharmaceuticals. But the frequency of coinage seemed to be higher at multinational level. Furthermore, blending was also employed at both levels but at national level it seemed as more preferable choice. As far as the process of clipping was concerned it was observed in some trade names at both level but was more prominent among national pharmaceuticals. The process of derivation was also seen, but not extensively. Moreover, the acronym process was found in only one trade name of national level whereas it was completely absent at the multinational level. Apart from this, borrowing and reduplication were not found at all at either level. None of the trade names was created using these two processes.

5.1.1.1. Findings Related to Research Question 1

1. Coinage was the most dominant word formation process, observed in 50 out of 150 trade names (32 multinational, 18 national).
2. Blending was a frequently used process**,** appearing in 42 trade names overall.
3. Clipping (fore-, back-, mid-, and complex) was commonly used, particularly in national trade names.
4. Atypical mid-clipping was observed, where the middle of the word was removed but the beginning and end were retained.\
5. Acronyms were rarely used, with only 1 instance found at the national level.
6. Compounding was minimally employed, seen only 3 times, exclusively in national trade names.

7. Graphological deviation and anagramming were found in 13 trade names, showcasing creative, non-traditional processes.
8. Borrowing and reduplication were not observed at all, indicating a complete absence of these processes.

5.1.1.2. Differences and Similarities in National and Multinational Trade Naming

The researcher addressed the second question of the study following the findings presented in the Table 5.1. The study aimed to compare the trade naming of national and multinational pharmaceutical companies in Pakistan to determine the differences in the trade naming. Through an analysis of the frequency of word formation processes the researcher came up with the following findings.

1. Coinage was more prevalent in multinational companies (32 vs. 18 in national companies).
2. Blending was more frequent in national companies**,** with 27 occurrences compared to 15 in multinational.
3. Clipping was used more in national trade names**,** showing a tendency toward shorter and more accessible names.
4. Twenty multinational trade names were identical to their generic names**,** a trend not observed in national names
5. Creative strategies like compounding and acronym use were confined to national companies**,** though minimally applied.

5.1.1.3. National and Multinational Perspectives on Word Formation Processes

The researcher conducted semi-structured interviews from the national and multinational pharmaceuticals to assess their perspectives regarding word formation processes.

5.1.1.4. Findings Related to Research Question 3

It was explored through the interviews that the pharmaceutical companies in Pakistan were not provided with any particular framework for the trade naming of their drugs by the DRAP (Drug Regulatory Authority of Pakistan). Instead, it only instructed

them that the name should not be misleading or confusing, and it should be easy, unique, easily pronounceable, and memorable.

Certain word formation processes were found in the trade names but few of them were linguistically non-standard. However, it became evident that both national and multinational pharmaceuticals were not very familiar with most of the standard terms and specific processes of word formation. However, they had a little bit knowledge of blending, clipping, and the process of acronym observed in the trade names. The other word formation processes such as the process of derivation, compounding, graphological deviation, and anagramming were observed in the trade names but they were not employed consciously by the pharmaceutical industries as they had very little knowledge of them. So, while creating the trade names they did not intentionally incorporate these processes but randomly applied different techniques on their own without following any proper process.

Furthermore, the interviewees mentioned that the unavailability of a particular framework presented several challenges to them such as struggle to generate new trade names, time consumption, delays in approval, and creation of ambiguous trade names.

5.2. Conclusion

To sum up, various word formation processes were observed by the researcher in the current study i.e. the process of coinage, clipping, blending, acronyms, compounding, derivation, anagramming, and graphological deviation at the national pharmaceuticals while at the multinational level, the process of coinage, blending, clipping, derivation, and anagramming were observed. The processes like acronyms and compounding were not found at multinational level. Moreover, reduplication and borrowing were completely absent processes at both levels. It was also notable that blending was more commonly used at the national level, whereas at the multinational level coinage was more dominant.

This study also uncovered some other word formation processes that were not standard but still workable such as different other types of blending, and a mid- clipping process. These processes can be incorporated into linguistics to help formulate new trade names.

Furthermore, the study confirmed that pharmaceutical industries were not instructed by DRAP to use any specific word formation processes that led them to various challenges. Therefore, the study concludes, although pharmaceutical companies struggle to create new trade names they should be provided with a proper framework for naming.

5.3. Recommendations

The following recommendations have been made for future researchers.

1. The current study emphasizes the need for a standard framework. So, future researchers may focus on refining the guidelines for trade naming based on word formation processes that the pharmaceutical companies can follow while trade naming.
2. The future researchers can expand the unconventional processes identified in this study by establishing them within the field of linguistics and explore their application in other domains as well.
3. The study recommends the future researchers to conduct comparative analyses of word formation processes across pharmaceutical sectors such as nutraceutical, homeopathic, Ayurvedic, and pharmaceutical products that will help to identify unique linguistic techniques and patterns. In this way, the current study provides foundation for comparative analyses across different sectors. Additionally, the sample size is small; it can be expanded to a larger group and include other cities in Pakistan.
4. The future researchers can also investigate the relationship between morphological structure and phonological considerations in the selection of pharmaceutical trade names.
5. A cross-linguistic morphological study can be conducted to make a comparison of processes used in trade names across different languages.

5.4. Implications

1. This study enhances linguistic insight into the strategic use of word formation processes in pharmaceutical trade naming.
2. It also reinforces the need for a standardized framework to guide consistent and effective trade name creation.

3. It paves the way for future cross-sectoral investigations, such as comparisons between homeopathic and pharmaceutical naming practices.
4. It provides actionable guidance for pharmaceutical companies to adopt linguistically and commercially effective naming strategies.
5. The findings highlight the need for a more standardized naming framework, which can support regulatory bodies in developing clearer guidelines to ensure safe, consistent, and non-confusing drug names in the pharmaceutical market.

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APPENDIX A

INTERVIEW GUIDE

Topic: Word formation processes in trade naming: a comparative study of national and multinational pharmaceutical companies in Pakistan

Interview with pharmaceutical Companies

Name of the Company _____

Name of the participant (Optional) _____

Designation _____

1.	What naming processes does the DRAP recommend you to come up with the new trade names for your pharmaceutical drugs?
2.	What challenges do you face while naming the pharmaceutical drugs?
3.	What are the naming processes you apply to come up with the new trade names?
4.	Do you borrow words from other languages for the trade naming of the drugs?
5.	Do you shorten, combine or repeat existing words to create new trade names? If yes, how?
6.	How do you form new trade names of pharmaceutical drugs by adding small bits of words?
7.	Could you please share if you use acronyms/initialism to come up with the new trade names?

APPENDIX B

PHARMACEUTICAL TRADE NAMES SELECTED FOR ANALYSIS

AV	Lenwin	Adenosine	Amclav	Aminophyline	Amlobest
Amoxil	Ampicillin	Apixaget	Cough go	Acetylcysteine	Esoprazole
Flopen	Imigran	Kaphalexin	Cefiget	Fentanyl citrate	Metromoxi
Azithromycin	Ciprin	Artepearl	Atarax	Atracurium besylate	Augmentin
Aztreonam	Calpol	Capoten	Cardiovasc	Levofloxacin	Cefopearl
Ciprofloxacin	Diodex	Claramet	Clindapearl	Levoxacin	Lincocin
Cova	Cozeal	Cyprex	Daclaget	Daptomycin	Lipiget
Droperidol	Dyazide	Ebaget	Epinephrine	Linzopearl	Meroget
Esoprime	Feldene	Fenoget	Frecid	Fexoprime	Flagyl
Fluconazole	Flueze	Formiget	Fortum	Meprazole	Getformin
Incruse	Indomethacin	Ximcef	Inspra	Meriflox	Isopearl
Clodium	Ketoroget	Ertuget	Coreg	Cisatracurium Besylate	Mydil
Diazepam	Irocom	Lispril	Noxi	Erythromycin lectobionate	Nervin
Lamomet	Leflox	Maxolon	Migril	Ketoralec Tromethamine	Paiko
Medol	Mefen	Metrozole.	Metrocam	Regain-XR	Metropram
Meropenam	Metpride	Mexestin	Mibega	Sologesic	Midlisin
Mogel	N-sodi	Montiget	Inhalerin	Survive plus	Moxiget
Nexum	Pramest	Nixima	Opox	Sivab	Pcef
NewDay	OPrime	Ofloprime	Pebtrin	Vitaprime	Ofloxin
Pefipime	Peptiban	Pregab	Regulair	piriton	Rukobia
Rize	Septrin	Softin	Tenoxam	Zopium	Scabipearl
Tabak	Tasmi	Tipra	Fluka	Zyloric	Skelgesic
Velosef	Xanax	Zentel	Zantac	Tioget	Wizen
Ultiva	Zejula	Xeticam	Zinar	Terbipearl	Xyzal
Velpaget	Valtrex	Zoldap	Werilax	Zyrtec	Brodin

APPENDIX C

INTERVIEWS WITH THE PARTICIPANTS

(P/1)

1. What naming processes does the DRAP recommend you to come up with the new trade names for your pharmaceutical drugs?

DRAP does not suggest any particular process, but only demands a unique and different names.

2. What challenges do you face while naming your products?

As we do not have any standard procedures from DRAP, so we just try different techniques to create names. It takes a lot of time and effort, especially to make sure the name is unique and fits the regulatory instructions.

3. What are the naming processes you apply to come up with the new trade names?

We do not have any particular ways to use for the formation of the names. However, we try to generate different trade names that must not match with already existing names. For this we do not rely on one or two specific processes rather we try different random techniques i.e. joining two parts of words that resemble our company's name or sometime we combine company's name with some other word and generate new names. We ensure that our trade names reflect the uses of the drug**,** how the drug will be administered**,** strength and dosage**,** the specific conditions or situations in which the medicine is prescribed, used, or dispensed**.**

4. Do you borrow words from other languages for the trade naming of your drugs?

Usually we do not do it.

5. Do you shorten, blend or repeat existing words to create new terms for your product? If yes, how?

We do not usually shorten a single word on its own nor do we repeat the same part of particular word or complete word to make new word. We often take two or more shortened words from different words and then combine them to create a new name.

6. How do you form new trade names of pharmaceutical drugs by adding small bits of words?

We do not remove. Sometimes we add but it is also not a common practice.

7. Could you please share if you create acronyms/Initialism to name your products?

No, we do not create names using this process.

(P/2)

1. What naming processes does the DRAP recommend you to come up with the new trade names for your pharmaceutical drugs?

No, it does not provide us any particular process to follow for trade naming. However there are guidelines that suggest us to make unique names that must be different from already existing names.

2. What challenges do you face while naming the pharmaceutical drugs?

One of the biggest challenges we face is that there's no defined process given by DRAP. We just keep trying different combinations, hoping one gets approved and that takes a lot of time and effort.

3. What are the naming processes you apply to come up with the new trade names?

We do not have a specific procedure to follow. We form names randomly and select one that is more suitable and different. Then we finalize one of them and send it to DRAP. However, the nature, strength, dosages and ways of administration are very important factors which must be considered to name a drug.

4. Do you borrow words from other languages for the trade naming of your drugs?

No, we do not.

5. Do you shorten, combine or repeat existing words to create new terms for your product? If yes, how?

We often cut or shorten our company name and combine it with the first or final part of chemical or generic names. However, we really do not use duplication.

6. How do you form new trade names of pharmaceutical drugs by adding small bits of words??

We do not remove smaller bits rather we prefer to omit a part of the word and join it to the other.

7. Could you please share if you use acronyms/initialism to come up with the new trade names?

I do not think so, this is not commonly used.

(P/3)

1. What naming processes does the DRAP recommend you to come up with the new trade names for your pharmaceutical drugs?

DRAP wants us to make the trade names quite different from the ones already present. But, it does not recommend us any methods that can be used to create new trade names

2. What challenges do you face while naming the pharmaceutical drugs?

Honestly, the main challenge is the absence of any specific naming procedures. We often rely on guesswork, applying random methods to create a name that's acceptable. This not only consumes a lot of time but also increases the chances of rejection during regulatory approval.

3. What are the ways you use to come up with the new trade names?

We have no specific procedures. We experiment randomly without following any methods. Usually, we name the drugs on the basis of routes, uses, doses, and strengths of drugs while trade naming.

4. Do you borrow words from other languages for the trade naming of your drugs?

No. We never did this.

5. Do you shorten, combine or repeat existing words to create new terms for your product? If yes, how?

Yes, we often try random combinations of different words considering uses, dosage, side-effects, indications and contraindications of our products. We do not shorten a word. And we also do not use repetition of same word.

6. How do you form new trade names of pharmaceutical drugs by adding small bits of words?

No, we do not employ such strategies.

7. Could you please share if you use acronyms/Initialism to come up with the new trade names?

We are not familiar with this technique.

(P/4)

1. What naming processes does the DRAP recommend you to come up with the new trade names for your pharmaceutical drugs?

No, there are no specific processes recommended by DRAP to follow. DRAP instructs us to ensure that the trade names of pharmaceutical drugs must not be misleading, confusing, or similar (Print, Handwriting, and Speech) to existing trade names. Apart from this, the name should not convey that the medicine is better or has specific benefits that are not true. The name should not convey spiritual benefits to be the best or superior in any way.

2. What challenges do you face while naming your products?

We face the challenge of working without specific processes. Only general instructions are provided, like ensuring the name is not misleading, confusing, or similar to existing names. So, we mostly rely on our own methods, such as using generic names or inventing entirely new words, which makes the process uncertain and tricky.

3. What are the naming processes you apply to come up with the new trade names?

We often follow standard conventions of chemical naming. Sometime we use generic names as trade names. Usually we create totally new terms that do not contain any specific meaning or that are not already existing names. However, the situation or condition in which the drug is prescribed, used, and dispensed is very crucial to consider. Apart from this, the strengths and dosage of the drug also play an important role.

4. Do you borrow words from other languages for the trade naming of your drugs?

Certainly not.

5. Do you shorten, combine or repeat existing words to create new terms for your product? If yes, how?

No we do not.

6. How do you form new trade names of pharmaceutical drugs by adding small bits of words?

We do not think so, we remove them.

7. Could you please share if you use acronyms/Initialism to name your products?

No, we do not.

(P/5)

1. What naming processes does the DRAP recommend you to come up with the new trade names for your pharmaceutical drugs?

DRAP does not suggest us processes to follow for trade naming. However, it instructs us to create names that are unique, distinctive, short, catchy and memorable. It also instructs that names of the drugs should not convey misleading therapeutic information. The names should not suggest a frequency or method of administration that does not match the product.

2. What challenges do you face while naming your products?

To comply with given instructions, it is very challenging to create different trade names when there is no proper tool in place for their formation.

3. What are the ways you use to come up with the new trade names?

The uses of the drug**,** the form or nature of the product**,** the administration route**,** the dosage and strength**,** the specific medical situations in which the drug will be prescribed, used, or dispensed are considered. But we do not follow any specific ways. We just try to come up with some appealing names that are easy to say. We follow random methods and techniques on our own without even knowing them consciously. We cannot name those techniques.

4. Do you borrow words from other languages for the trade naming of your drugs?

Certainly not. We prefer to create names in English.

5. Do you shorten, combine or repeat existing words to create new terms for your product? If yes, how?

We are familiar but not accustomed to abbreviate, cutting or combining of words. Besides this, we do not prefer repetition of same part or word. We generate mostly

totally new terms without applying any specific processes. Sometime we combine words but do not follow any regular patterns for it.

6. How do you form new trade names of pharmaceutical drugs by adding small bits of words?

We do not do it.

7. Could you please share if you use acronyms/Initialism to name your products?

No, we do not use.

(P/6)

1. What naming processes does the DRAP recommend you to come up with the new trade names for your pharmaceutical drugs?

DRAP does not recommend any specific naming processes. They mainly provide general guidelines, such as ensuring the names are unique, non-misleading, and not confusing.

2. What challenges do you face while naming your products?

One of the main challenges we face is the absence of clear procedures. Since we are not provided with specific methods, we have to rely on our own creativity, which often leads to multiple rejections and consumes a lot of time and effort.

3. What are the ways you use to come up with the new trade names?

We usually do not follow a single procedure to create new names. As we take most of the active pharmaceutical ingredients (API) of drugs from foreign head offices and add derivates (Excipients) from our own produced drugs. So, we try to use the names of active ingredients in our drug names to maintain identity of drugs. Sometimes we combine the names of both to generate new names. Sometimes we also use the full name of APIs if they do not exist already. When we come up with trade names, we start by considering the population that will be using the drug, how the drug will be administered, the strength and dosage, the contexts in which the drug will be prescribed or used, making sure the name is practical and does not cause any confusion or ambiguity.

4. Do you borrow words from other languages for the trade naming of your drugs?

No.

5. Do you shorten, combine or repeat existing words to create new terms for your product? If yes, how?

   We use cutting of long words to make them small and easy say. We also combine different parts or whole words. We usually shorten the generic names and combine them with our company name to create the new names. However, we avoid using the same word repeatedly

6. How do you form new trade names of pharmaceutical drugs by adding small bits of words?

   No, we do not do that.

7. Could you please share if you use acronyms/Initialism to name your products?

   No, we do not use.