LEXICAL AND SYNTACTIC AMBIGUITY IN THE VACCINE NEWS HEADLINES OF THE STAR

CHANG CHUI SHAN

18AAB04718

SUPERVISOR: MS. BHARATHI A/P MUTTY

SUBMITTED IN

PARTIAL FULFILMENT OF THE REQUIREMENTS

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APPROVAL SHEET

This research paper attached hereto, entitled "Lexical And Syntactic Ambiguity in The Vaccine News Headlines of The Star" prepared and submitted by Chang Chui Shan in partial fulfilment of the requirements for the Bachelor of Arts (Hons) English Language is hereby accepted.

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Supervisor   Date:

Supervisor's name: Ms Bharathi a/p Mutty

ABSTRACT

Since the Covid-19 vaccination rollout, the news media has played an important role in reporting the vaccine-related news to reduce the risk of getting and spreading the Covid-19 disease. However, people nowadays are preoccupied with busy schedules that they just glance at the news headlines and determine what they imply. If a word, phrase or sentence in the headlines has more than one interpretation, they may misinterpret them and receive the wrong information. Therefore, the purpose of this study was to investigate the lexical ambiguity and syntactic ambiguity in the vaccines headlines of The Star news, as well as to determine how these types of ambiguities affected the readers' interpretation of the headlines. After collecting the headlines from The Star news, the definitions of the words and phrases were deduced using Oxford Learner's Dictionary, while the sentence structures were identified using parsing. A questionnaire was also disseminated to the respondents to obtain additional interpretations of the words or sentences. Next, a semi-structured interview was conducted with nine participants from three different educational backgrounds. The interviews were then transcribed and analysed thematically. The findings revealed that the lexical ambiguity and syntactic ambiguity existed in the vaccine-related news headlines in The Star, with 5 lexical ambiguities and 3 syntactic ambiguities. Nonetheless, the participants were not affected by these types of ambiguities because of the context and their knowledge of the topic. The research study also posed a few limitations and research gaps, where the other considerations and a larger sample of participants could be taken into account.
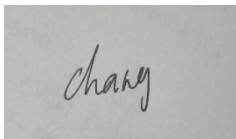
DECLARATION

I declare that the material contained in this paper is the end result of my own work and that due acknowledgement has been given in the bibliography and references to ALL sources be they printed, electronic or personal.

Name: CHANG CHUI SHAN

Student ID: 18AAB04718

Signed:

Date: 20th April 2022

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LIST OF ABBREVIATIONS

CNN   Cable News Network

EFL   English as Foreign Language

PPV   Pusat Pemberian Vaksin (Vaccine Center)

SPM   Malaysian Certificate of Education

UTAR   Universiti Tunku Abdul Rahman

CHAPTER I

INTRODUCTION

This chapter includes background of the study, statement of problem, objectives of the study, research questions, significance of the study, limitations of the study and definition of key terms.

1.1 Background of the study

Language plays a crucial role in everyday life (Bloomfield, 1984) because it serves as a medium of communication among people in society (Sirbu, 2015). Language is also a structured and shared mode of communication that consists of spoken and written words, figures, characters, and gestures, or a mixture of these (Huff & Christensen, 2018). People around the world use language to exchange information and express thoughts, ideas, and even feelings (Rabiah, 2018). Without the use of language, it is impossible to communicate with others (Banga, 2015).

In today's world, the advancement of technology has altered the methods that human beings utilize to communicate (Alhadlaq, 2016). For example, the internet has evolved into a vital instrument for information management, information search, research, learning, as well as communication. It enables users to rapidly and effectively access the most up-to-date information (Shahibi & Rusli, 2017). This has also prompted an increasing number of newspaper industries to convert their news sources into online publications and subscriptions (Gutierrez, Martinez & Myrick, 2020). As a result, more Malaysians are shifting to online platforms such as social media as their medium of choice for convenient reading, immediate information, and entertainment (Taibi & Na, 2020).

According to a survey conducted in Malaysia by Hirschmann (2021), 88% of people acquire news online, including social media, whereas only 24% of people get news via print

media. Regardless of the online news or print newspaper, both of them contribute tremendously in developing the language (Irawan, 2009) and providing information about daily-life events. The readers are provided with a wide range of information in the areas of politics, entertainment, sports, health, business, and so on. In each of the topics, there is a bold-big font as a headline. The news headline is not only the title of a news story that summarizes the entire story (Chiluwa, 2007) but also tries to help the readers grasp the meaning of the text (Bonyadi & Samuel, 2013).

Based on Hameed (2008), the headlines are written in a unique kind of language with their own grammar and vocabulary. In addition, it has distinctive syntactic properties, which make them a grammatical oddity (Fairclough, 1995, as cited in Fruttaldo, 2017). The headline not only has functions that specify its shape, content, and structure but it also limits the freedom of the writers as they are only allowed to attract the readers to the story with the least number of words (Reah, 2002). Reah (2002) also mentioned that due to the functions of the headline and the limited space available to the writer, various linguistic choices that can lead to ambiguity are made.

Ambiguity refers to having two or more possible meanings. In other words, when a sentence has multiple interpretations, it is ambiguous (Simatupang, 2007). There are two basic types of ambiguity, namely lexical ambiguity and syntactic ambiguity. To analyse the lexical ambiguity, it is important to know the lexical meaning (Anggur, 2019), while syntactic ambiguity can be determined from the relationship between the words and clauses of a sentence and the sentence structure underlying the word (Fera, 2019). Ambiguity can be a barrier to effective communication because of the semantic ambiguity that results from the susceptibility of an ambiguous expression to double or multiple semantic interpretations (Oluga, 2010). In spite of this, ambiguity is inevitable and ubiquitous because 80% of commonly used words have more than one dictionary entry and some words have multiple definitions (Rodd, 2018).

Consequently, the ambiguity can also feature in the headline of one of the hottest topics in 2021, which is the Covid-19 vaccination. There is a deluge of vaccination news in the media as people are putting efforts into combatting the Covid-19. Dong and Zheng (2020) stated that the media is a powerful source of information that people rely on in health crises. Hence, it is critical to eliminate ambiguity in order to prevent confusing the readers (Khalifa, 2018; Dong & Zheng, 2020). However, the issue of ambiguity does exist in the news headline that is related to vaccination. For example, there was lexical ambiguity that appeared in the CNN news with the headline "Here's where we stand on getting a coronavirus vaccine" (Yan, 2020). In this sentence, the verb "stand" can be interpreted in two ways. It can be referred to efforts by health professionals in search of the coronavirus vaccine, or it could refer to a particular opinion about the idea of getting a coronavirus vaccine (Makpul & Akinremi, 2020). Makpul and Akinremi (2020) also highlighted that it is a recognized fact that the potential of ambiguity to create confusion in the mind of the receiver or reader, and its dire consequences in real-life communication situations are related to their psychology, society, politics, economy, and physical. With various interpretations of a word, the readers become perplexed and unable to obtain the right information.

Therefore, this research aims to identify the lexical and syntactic ambiguity of the vaccination headlines in The Star news and see how these types of ambiguity will affect the readers to interpret the meaning of the headlines.

1.2 Problem statement

Due to syntactic ambiguity or lexical ambiguity, interesting headlines will be semantically underdetermined to the extent that no information is conveyed. In order to generate memorable headlines in a small amount of space, the writers frequently violate the qualities of "be clear, easy to comprehend, and unambiguous" (Ifantidou, 2009). This turns out

to be a problem as it can cause readers to become confused and frustrated. Ambiguity can pique the readers' interest and curiosity, but it can also mislead them because it creates a sense of bewilderment and hinders readers' understanding of the headline, causing them to stop reading (Khalifa, 2018).

However, the news provides key information about vaccination to reduce the risk of spreading the Covid-19 pandemic. When they stop reading, they miss out on critical information about the vaccination. In addition, relying just on headlines is insufficient, especially it contains an ambiguity that misleads the readers. This is because they will perceive the wrong meaning and lead to receiving the wrong information. Those misleading headlines and ambiguous headlines can have severe consequences, such as people becoming anti-vaxxer and potentially leading to more deaths (Livingston, 2021).

While extensive study has been conducted on lexical and syntactic ambiguity in news, most of them did not investigate how the types of ambiguity that they found can affect the readers (Fitri, 2019; Tirangga, 2014). Moreover, the studies of lexical ambiguity and syntactic ambiguity in the Malaysian context were also considered inadequate. Thus, this research attempts to fill this gap to see how the Malaysian readers would interpret the vaccine headlines that contain lexical ambiguity or syntactic ambiguity.

1.3 Research objectives

There are two objectives of this research:

1. To find out the lexical ambiguity and syntactic ambiguity used in The Star news headlines related to vaccination and the dominant types of ambiguity.
2. To evaluate how these types of ambiguity affect the readers in interpreting the meaning.

1.4 Research questions

The research questions are as follows:

1. What are the lexical ambiguity and syntactic ambiguity used in The Star news headlines related to vaccination and the dominant types of ambiguity?

2. How do these types of ambiguity affect the readers in interpreting the meaning?

1.5 Significance of the study

This research can benefit multiple parties such as educational institutions, teachers, and students by expanding their knowledge of lexical and syntactical theory. It also acts as a guide for them to have a better understanding of identifying lexical ambiguity and syntactic ambiguity. Furthermore, the research can be an additional resource and reference for both lecturers and students who are interested in this field. With this study, people can also understand how the ambiguous vaccination headlines can alter the readers' interpretation of meaning.

In addition, this research can benefit people from other fields, particularly journalists. Although ambiguities are unavoidable, the journalists may nonetheless enhance their writing and reduce the ambiguities when reporting the news. While the readers should be aware that a word or sentence may have more than one meaning or interpretation, and be able to determine which interpretations are valid in order to obtain the correct interpretation.

1.6 Definition of Key Terms

1. Ambiguity: A statement or an expression is ambiguous when it can be interpreted in more than one way. It is valid to consider ambiguity at all levels of meaning: expression meaning, utterance meaning, and communication meaning (Lobner, 2014).

2. Lexical ambiguity: Lexical refers to a connection with a word and vocabulary of a language, whereas ambiguity denotes that the meaning is not clearly defined. Lexical ambiguity arises

from the fact that words can have multiple meanings and their semantic richness can lead to ambiguity in the text, therefore posing a challenge for the readers. As highlighted by Krovetz (1997), lexical ambiguity can be further divided into homonyms and polysemy, based on whether or not the meanings are related.

3. Syntactic ambiguity: Syntactic ambiguity is also referred to as structural ambiguity or grammatical ambiguity. It appears if an utterance or sentence can be assigned more than one structural analysis at the level of syntax (Giertz, 2014).

4. The Star: The Star is an English-language newspaper in Malaysia since 1971, while the news website was launched in 1995. It is the most frequently read newspaper by Malaysians ("The Star Tops," 2019). Based on a survey, it was ranked as the top English-language news portal with the highest score for brand trust in Malaysia ("Preference for The Star," 2021).

5. Headlines: The headline is also known as the "title" of the news which is printed in large letters and place in the first or second sentence. It tells the readers the main facts of the story with the fewest words, usually without adding or implying more content. It may also have other roles, such as amusing, enticing, or entertaining the readers with amusing puns (MacFarlane, 2012).

1.7 Conclusion

As a whole, this chapter provided an overview of the fundamentals of the research. The readers can understand the background of the research, statement of the problem, objectives of the study, research questions, significance of the study, limitations of the study, and definition of key terms. Literature review, methodology, data findings and discussions, and conclusion will be presented in the following chapters.

CHAPTER II

LITERATURE REVIEW

In this chapter, the researcher provides the background of the theories and concepts related to the study in this research paper and is followed by looking at previous studies on lexical and syntactic ambiguity in the news headlines that are similar to this study.

2.1 Lexical Ambiguity

Lexical ambiguity is a common linguistic phenomenon in which a single word shape corresponds to several different meanings (Zhang, 2019). It is caused by two causal factors – homonymy and polysemy (Alzein, 2018). A homonymy is a word with two or more distinct semantically unrelated meanings, whereas a polysemy is a word with two or more closely related meanings (Shen & Li, 2016).
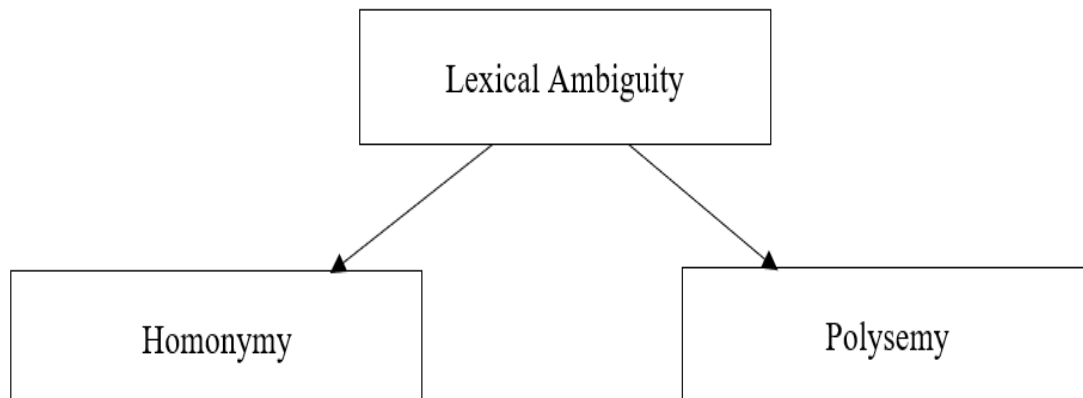
2.1.1 Homonymy and Polysemy

As stated by Kreidler (1998), homonymy occurs when the pronunciation and spelling are identical but the meanings are irrelevant. In other pairs, the pronunciation is the same but the spelling is not. Homonyms can be distinguished from homophones and homographs in language because the resemblance of forms can be recognized in spelling or speech. If they have the same pronunciation, such as the words "buy", "bye", and "by", they are called

homophones; if they have the same spelling, they are called homographs (Ginting, 2018). For instance, *I saw a tall tree outside the house.* As for the word "saw", it can be a past tense of the verb "see", or it can be a different verb "saw", which means to cut something with a saw (Charina, 2017). They all create ambiguity, regardless of which homonyms they are (Fromkin, Blair & Collins, 1991, as cited in Ritan, 2018).

Polysemy, on the other hand, is a word or phrase with multiple meanings that are all related (Kreidler, 1998). According to Siregar (2018), polysemy involves lexical sense, which is related to the same underlying meaning of a word as it appears in several contexts. In other words, the core meaning of the word is the same in all sentences. Polysemy is common in natural language and affects both content and function words. Although knowing which sense is intended on a given occasion rarely causes difficulties for people who speak a language, it is well-known that the polysemous words are difficult to deal with both theoretically and empirically (Vicente & Falkum, 2017; Retnomurti, 2021). English contains many polysemous words. For example, the verb "to get" can have three meanings: (1) procure (I'll get the drinks), (2) become (she got scared), and understand (I get it). Identifying polysemy can be difficult if one lacks sufficient technical knowledge or does not have access to the context (Mammadova, 2017). Retnomurti (2021) also concluded that searching for the core meaning is the most appropriate way for determining homonyms and polysemous words. Although it is sufficient to look up the dictionary's meaning, the core meaning condenses the dictionary's meaning into a short digestible meaning.

Homonymy and polysemy frequently cause misunderstandings in writing and communication. Many people are perplexed by both because it is arduous to distinguish between homonymy and polysemy, or which words or sentences contain both, whereas many of the decisive factors that lead to the occurrence of homonymy and polysemy (Ginting, 2018).

2.2 Syntactic Ambiguity

Syntactic ambiguity or structural ambiguity implies that a sentence structure has more than one interpretation or can be analysed in more than one way due to its syntactic structure (Sholika, 2021). It can be caused by word-formation events that result in shifts in meaning and ambiguous phrases (Fitri, 2019). In addition, Kristian (2018) also claimed that ambiguity can happen in a phrase or sentence because of its grammatical structure.

Syntactic ambiguity is distinct from lexical ambiguity, in which the meaning of specific words varies but does not affect the structural interpretation of the utterance. It can include lexical ambiguity, but they are not restricted to that. For example, *she told me he met her*. The sentence can be interpreted in two ways, (1) she told me that he met the person who told me, or (2) she told me that he met the woman (Kumari & Sunalini, 2020).

In order to resolve the syntactic ambiguity, Rohmaniah (2017) mentioned that ambiguity of each sentence can be differentiated using a parsing tree. With a parsing tree, the roles of each word are described, and the words are divided into their parts of speech, hence ambiguity can be resolved. Kristian (2018) and Sholikah (2021) also stated that a tree diagram should be used because it is the most commonly used for explaining all of the possible phrases or sentences generated by a language. Another option to disambiguate the meanings is to use a bracket (Walton, 2020).

2.3 Ability to comprehend and interpret the types of ambiguity

Several studies have been conducted to investigate people's ability to detect and decipher various types of ambiguity. Rose (2015) tested the ability of monolingual and multilingual English-speakers to detect and decipher the crash blossoms by asking them to identify the ambiguities in the headlines. The findings revealed that 6 out of 8 monolingual participants detected and deciphered the majority of ambiguous headlines, while 6 out of

multilingual participants could detect but only 5 deciphered the majority of the ambiguous headlines. However, the difference was insignificant, so the data were insufficient to draw a conclusion on whether the number of languages spoken has an effect on detecting and understanding ambiguity in headlines.

Another study was done by Khalifa (2018) in which the researcher evaluated the reader's capacity to accurately comprehend each sort of ambiguity, including 60 non-native English readers who participated in the study. The results found that syntactic ambiguity was the most difficult sort of ambiguity for the readers to interpret, with just 42% of readers being able to gain an exact meaning, while 58% were unable to do so owing to the usage of ellipsis. In the case of lexical ambiguity, 45% of readers were able to grasp the exact meaning of the lexically ambiguous headlines, while 55% were unable to do so. The study concluded that untangling lexical ambiguous statements requires situations where readers can draw on their previous experience. This could be explained that the non-native speakers of English exhibited difficulty in processing all the given types of ambiguous sentences, as have done by Khawalda and Al-Saidatm (2012).

The findings were equivalent to the study conducted by Salehi and Basiri (2016). However, the method utilized was dissimilar. To see which types of ambiguity were the most challenging, the researcher compared the processing time of Persian undergraduate students on lexical ambiguity and structural ambiguity. They employed convenience sampling to examine a total number of 59 undergraduate EFL learners with the same proficiency level from Engineering and Science majors at the Sharif University of Technology. The results showed that lexical ambiguity took the least amount of processing time compared to structural ambiguity, implying that it is the easiest type of ambiguity to process. This is due to the fact that participants dealing with lexical ambiguity must deal with two different interpretations of the same word, one of which is often used. The structural ambiguity, on the other hand, has to

deal with two distinct structures, each of which has a different meaning. It appears to be a more demanding task, so they devote more time to deciphering structurally ambiguous sentences.

While Almahameed (2020) focused on Jordanian learners who majored in English as a foreign language and had similar exposure to English, however, had different results. The participants managed to resolve only 47.4% of sentences with structural ambiguity and only 38.6% of sentences with lexical ambiguity. It demonstrated that lexical ambiguity is more difficult to deal with than structural ambiguity. As mentioned by the researcher, the results can be attributed to a lack of proficiency in grammar and lexis.

2.4 Previous studies

Various studies on ambiguities in news headlines have yielded disparate results. Based on research done by Tirangga (2014) on exploring the lexical ambiguity and grammatical ambiguity of the news headlines from The Jakarta Post and New York Times, the findings showed that the Jakarta Post generated more grammatically ambiguous headlines than the New York Times. The researcher also highlighted that it may be because the writer or editor is a non-native speaker, or because they create more ambiguous headlines in order to entice readers to read the whole article. According to Rohmaniah (2017), the study demonstrated that the second language learners have a higher chance of making syntactic ambiguity than native speakers. Nonetheless, the result was contradicted Khamahani and Tahirov (2013), which argued that the headlines written by native journalists are more ambiguous than those written by non-native journalists.

A study was done by Fitri (2019) to identify the lexical ambiguity and syntactic ambiguity found in CNN headlines. The researcher classified lexical ambiguities as homonymy, polysemy, synonym, and antonym, while syntactic ambiguity was classified as surface structure ambiguity and deep structural ambiguity. Fitri (2019) discovered that only 21

of the 24 headlines had ambiguous words or sentences. The results were similar to several studies (Ossunuga, 2013; Makpul & Akinremi, 2020).

Osunnuga (2013) found 66% of 100 headlines had lexical ambiguity, while 34 % had structural ambiguity by exploring the ambiguity in headlines of Yoruba newspaper. Osunnuga (2013) stated that the frequency of lexical ambiguity appears to be higher, which the writers have purposefully planned to create effective communication and aesthetics. As opposed to findings reported by these studies, Charina (2017) found that the dominant types of ambiguity that appear in the humor with the sources of newspaper headlines, advertisement slogans, and jokes from the electronic devices were syntactically ambiguous. However, these studies predominantly focused on textual analysis and lack investigation into the impact of these ambiguities on the readers.

2.5 Conclusion

To sum up, the existing literature has been reviewed regarding few theories and concepts related to this research, namely lexical ambiguity, lexical ambiguity, homonymy and polysemy, syntactic ambiguity, ability to comprehend and interpret the headlines, as well as the previous studies related to the types of ambiguity in headlines. In the next chapter, the researcher will discuss the methods that will be employed to conduct this research.

CHAPTER III

METHODOLOGY

In this chapter, the researcher focuses on the methods used to conduct this study, which includes the research design, instruments, population, and sample, as well as data collection and data analysis.

3.1 Research design

A qualitative approach was adopted to answer the research questions because it allowed the researcher to explore and better comprehend the complexities of a phenomenon (Williams, 2007). The researcher first identified vaccine news headlines that contained lexical and syntactic ambiguity from The Star, followed by a semi-structured interview to analyse the types of ambiguity that impact the readers' interpretations. Last but not least, the researcher analysed their transcription based on the recording.

3.2 Instruments

Two research questions were designed to examine the lexical ambiguity and syntactic ambiguity in news headlines and how they affect the interpretation of the readers. Hence, two main types of research tools were employed for this study: The Star News and semi-structured interviews. There were three additional resources to assist the data collection, known as Oxford Learner's Dictionary, parsing and a questionnaire to gather the definitions of the word, phrase, and sentence.

3.2.1 The Star

The vaccine-related news headlines from The Star served as the basis of the data of this research. As stated previously, it is one of Malaysia's most prominent news outlets. Furthermore, the vaccine news headlines were chosen because it is one of the most hotly

debated subjects in today's society. Due to the time constraints, the headlines were only chosen between 1st October 2021 to 31st December 2021. The number of the headlines collected relied on the number of the vaccine-related news headlines themselves containing either lexical ambiguity or syntactic ambiguity. The time frame was chosen not only because the vaccination was the trending topic during this period, but also because the booster shot began to be administered in Malaysia (Ng, 2021).

3.2.2 Questionnaire

In addition to researchers looking up definitions from the Oxford Learner's Dictionary, participants also assisted the researchers to find out the additional meanings by filling out the questionnaire. One questionnaire was disseminated to three participants. The participants were asked to choose whether they discovered lexical ambiguity or syntactic ambiguity in the sentence, what the word was, and how they could interpret it in another way.

3.2.3 Semi-structured interview

A semi-structured interview was conducted to see how lexical and syntactic ambiguity would influence readers' interpretation of vaccination news headlines. The semi-structured interview includes a combination of closed- and open-ended questions, followed by why and how questions (Adams, 2015). Through semi-structured interviews, the researcher can ask follow-up questions to elicit more information or explanations from the respondents based on their response. Participants were not allowed to know the headlines before the interview so that they would not search online to read the content and comprehend the meaning of the headlines. As a consequence, all of the headlines showed to the participants are equivalent in order to assure consistency and reliability in the results. The interview lasted around 15 – 30 minutes and was conducted through either audio call, video call, or face-to-face. In addition, the interview was recorded for the purpose of transcriptions.

3.3 Population and sample

In order to have an equal number of participants, nine respondents were chosen for this study and they were evenly divided into three groups, with three respondents representing each category. In this research, purposive sampling was employed. Before selecting the respondents to participate in the interview, two criteria were considered: the respondents should be a reader of The Star and fulfill the requirements of the educational level. They were chosen from three different educational levels because people with varying levels of education and background will interpret meaning differently based on their personal understanding (Tauran, 2021) (*see appendix C*). The levels of education are showed as follows: (1) have no prior certification of higher education, (2) enrolling in or graduating from English Language or English Education, (3) enrolling in or graduating from other courses other than English Language or English Education.

3.4 Data collection and data analysis

The researcher identified lexical ambiguity by using Oxford Learner's Dictionary and syntactic ambiguity by using tree diagram (parsing) in vaccine-related news from The Star. Apart from this, 24 participants were also invited to assist the researcher to interpret the meanings of the headlines. Following the data collection from the text, the participants required to analyse headlines containing ambiguity through a semi-structured interview. The headlines were chosen because respondents to the questionnaire fully agreed that their meaning was ambiguous. Their interview transcripts were analysed thematically in which the researcher was able to detect the codes across multiple interviews by comparing the responses of the participants. It also allowed the researcher to examine the relationship between education background and the interpretation of lexical ambiguity and syntactic ambiguity. Each of the themes was named and defined accordingly. At first, the researcher classified the opinion of

the participants towards the news headlines into two categories, which known as "easy" category and "difficult" category. The interpretations of the participants was divided into two categories: correct interpretations and wrong interpretations.

3.5 Conclusion

This chapter aims to demonstrate to readers how data was collected and analysed in order to achieve the research purpose. The research findings will be presented in the next two chapters, followed by further discussion and a conclusion to the study.

CHAPTER IV

FINDINGS AND ANALYSIS

This chapter revealed the lexical ambiguities and syntactic ambiguities in the vaccine-related news headlines in The Star. The definitions and interpretations of the words, phrases, and sentences provided through the questionnaire and Oxford Learner's Dictionary were displayed. Furthermore, the interview results from the nine participants were obtained via thematic analysis and presented in a table, which was first classified into "easy" and "difficult" categories. The "easy" category refers to the participants who found it easier to interpret the headlines without looking at the content, whereas those in the "difficult" category believe it is difficult to comprehend news headlines without looking at the content. After the participants were given five headlines that contained lexical ambiguity and syntactic ambiguity to interpret, their interpretations were then divided into "correct interpretations," where they interpreted the headlines correctly, and "wrong interpretations," implying that they interpreted the headlines incorrectly.

4.1 Lexical ambiguities and Syntactic ambiguities in The Star vaccine news headlines

Date	October	Types of Ambiguity
19/10/21	Debunk anti-vaccine myths with scientific facts, says expert	Syntactic Ambiguity
19/10/21	Expert back not jabbing kids under 12	Lexical Ambiguity
23/10/21	Civil servants refusing vaccine to face action	Syntactic Ambiguity

Date	November	Types of Ambiguity

3/11/21	In hindsight, registration for Covid-19 vaccination could have been <u>staggered</u>	Lexical Ambiguity
18/11/21	Viral post urging government to cancel Covid-19 booster shot programme uses misleading information	Syntactic Ambiguity

Date	**December**	**Types of Ambiguity**
1/12/21	Take steps to <u>secure</u> Covid-19 vaccines for children under 12	Lexical Ambiguity
10/12/21	The success of the vaccination <u>drive</u> has revived country's economy	Lexical Ambiguity
18/12/21	PPV <u>set</u> for booster rollout	Lexical Ambiguity

4.1 Vaccine news headlines and types of ambiguity

In this study, the researcher found eight vaccine-related headlines that contained ambiguity from The Star news, with five lexical ambiguities and three syntactic ambiguities. Table 4.1 above showed that the vaccine news headlines and types of ambiguity appeared from October 2021 to December 2021. In October 2021, there was one headline with lexical ambiguity and two headlines with syntactic ambiguities. Whereas in November 2021, there was only one headline with lexical ambiguity and one with syntactic ambiguity. In December 2021, the most common type of ambiguity found in the headline was lexical ambiguity, which accounted for three headlines. There was no syntactic ambiguity found in the headlines in December 2021. According to these data, the most dominant type of ambiguity that appeared in the vaccine-related news headlines of The Star was lexical ambiguity.
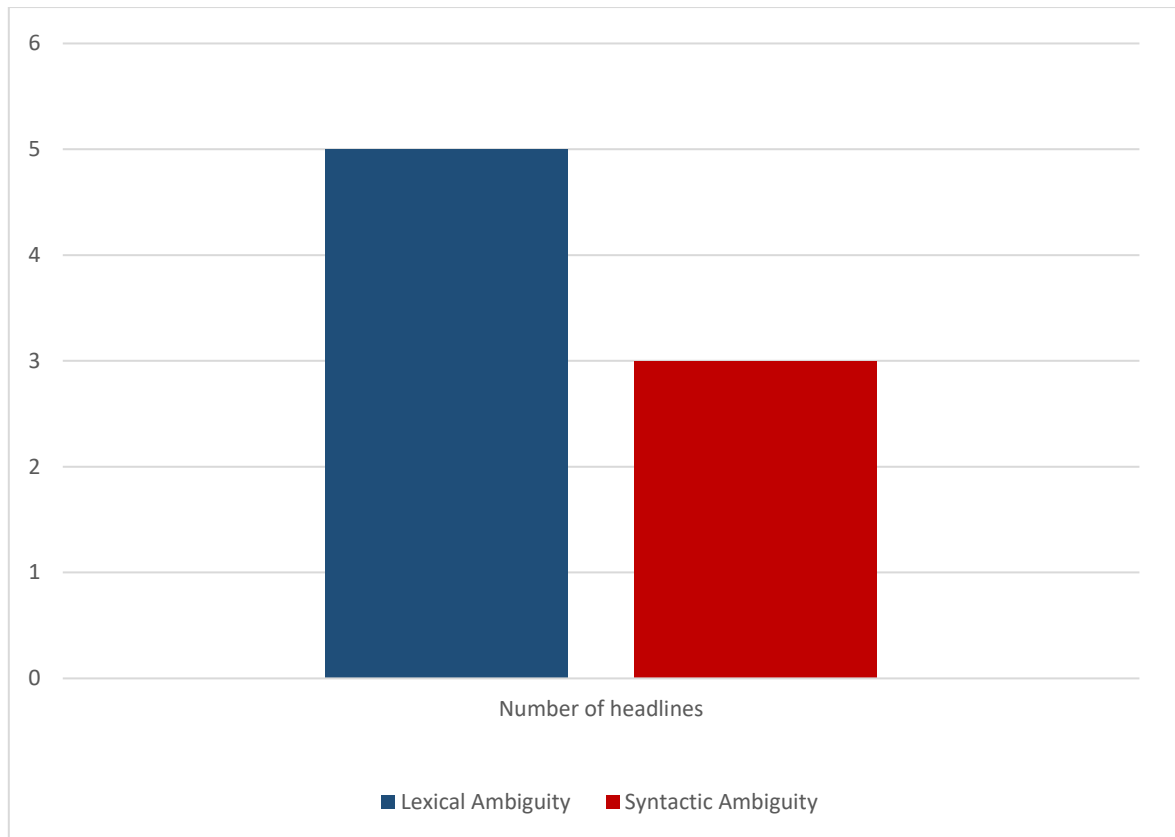
Figure 1: Number of lexical ambiguity and syntactic ambiguity

4.2 Questionnaire

The questionnaire was created in Google Form and then disseminated to a total of 24 UTAR respondents randomly using the Google Form link. Each headline is fixed to only three respondents. Based on the responses from 24 respondents, the findings were divided into three parts. The first part is "no," implying that they did not encounter any words or sentences with multiple meanings or interpretations *(figure 2)*. Next, the category of "yes but no meaning given" indicated that the participants found the headlines contained ambiguity but they did not provide additional meanings *(figure 3)*. The last category was "yes with meaning given," representing that the participants found ambiguity in the headlines and provided additional meanings *(figure 4)*.

Headline 8: The success of the vaccination drive has revived country's economy

Based on the headline above, do you find that there is a word that has multiple meanings? *

○ Yes

◉ No

Headline 8: The success of the vaccination drive has revived country's economy

Based on the headline above, which word has multiple meanings? *

○ Success

○ Vaccination

○ Drive

○ Revive

○ Economy

○ Other: _____

Headline 9: The success of the vaccination drive has revived country's economy

The word "drive" has multiple meanings (e.g. 1. make someone to do something; 2. to operate a vehicle so that it goes in a particular direction)

Apart from the above-mentioned meaning of the word "drive", do you know any other meanings? if yes, what does it mean?

_____

Which is the exact meaning of the word "drive" in the headline above? *

○ make someone to do something

○ to operate a vehicle so that it goes in a particular direction

○ Other: _____

Figure 2: No ambiguity found

Headline 4: In hindsight, registration for Covid-19 vaccination could have been staggered

Based on the headline above, do you find that there is a word that has multiple meanings? *

◉ Yes

◯ No

Headline 4: In hindsight, registration for Covid-19 vaccination could have been staggered

Based on the headline above, which word has multiple meanings? *

◯ hindsight

◯ registration

◯ vaccination

◉ staggered

◯ Other: ....

Headline 4: In hindsight, registration for Covid-19 vaccination could have been staggered

The word "staggered" has multiple meanings (e.g. 1. arranged in such a way that not happens at the same time; 2. very surprised and shocked at something you are told or at something that happens)

Apart from the above-mentioned meaning of the word "staggered", do you know any other meanings? if yes, what does it mean?

....

Which is the exact meaning of the word "staggered" in the headline above? *

◉ arranged in such a way that not happens at the same time

◯ very surprised and shocked at something you are told or at something that happens

◯ Other: ....

Figure 3: Yes but no meaning given

Headline 2: Expert back not jabbing kids under 12

Based on the headline above, do you find that there is a word that has multiple meanings? *

◉ Yes
○ No

Headline 2: Expert back not jabbing kids under 12

Based on the headline above, which word has multiple meanings? *

○ expert
◉ back
○ Other: _____

Headline 2: Expert back not jabbing kids under 12

The word "back" has multiple meanings (e.g. 1. support; 2. body part; 3. return; 4. further away)

Apart from the above-mentioned meaning of the word "back", do you know any other meanings? if yes, what does it mean?

opposite direction

Which is the exact meaning of the word "back" in the headline above? *

○ support
◉ body part
○ return
○ further away
○ Other: _____

Figure 4: Yes with meaning given

Out of the 24 respondents, there were only two respondents who chose "no" for the headlines as indicated below:

1. The success of the vaccination **drive** has revived country's economy (1 respondent)

Based on the headline above, do you find that there is a word that has multiple meanings?
3 responses
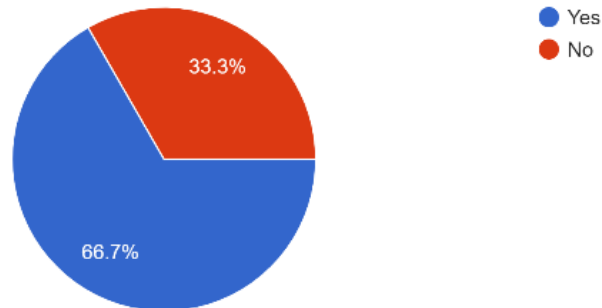
Figure 5

2. Debunk anti-vaccine myths with scientific facts, says expert (1 respondent)

Based on the headline above, do you find that the sentence can be interpreted in two or more possible meanings?
3 responses
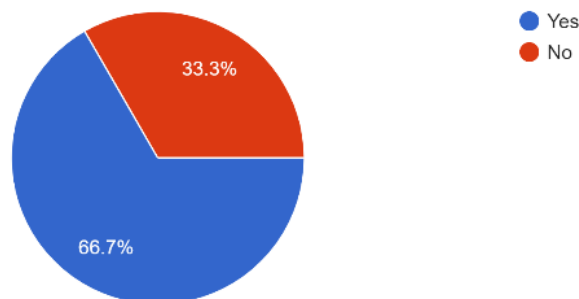
Figure 6

In terms of the category of "yes with meaning provided," there were only five respondents who agreed that a word or phrase had more than one meaning in the headlines, while providing additional definitions. However, all of them solely provided for the headlines that contained lexical ambiguity. For syntactic ambiguity, there was no alternate interpretation given.

Headline 2: Expert back not jabbing kids under 12

The word "back" has multiple meanings (e.g. 1. support; 2. body part; 3. return; 4. further away)

Apart from the above-mentioned meaning of the word "back", do you know any other meanings? if yes, what does it mean?

1 response

opposite direction

Figure 7: Participant provided other meanings for the word (1)

Headline 4: In hindsight, registration for Covid-19 vaccination could have been staggered

The word "staggered" has multiple meanings (e.g. 1. arranged in such a way that not happens at the same time; 2. very surprised and shocked at something you are told or at something that happens)

Apart from the above-mentioned meaning of the word "staggered", do you know any other meanings? if yes, what does it mean?

1 response

walk or move unsteadily

Figure 8: Participant provided other meanings for the word (2)

Headline 8: The success of the vaccination drive has revived country's economy

The word "drive" has multiple meanings (e.g. 1. make someone to do something; 2. to operate a vehicle so that it goes in a particular direction)

Apart from the above-mentioned meaning of the word "drive", do you know any other meanings? if yes, what does it mean?

1 response

An organised effort by a group of people to achieve something

Figure 9: Participant provided other meanings for the word (3)

Headline 9: PPV set for booster rollout

The word "set" has multiple meanings (e.g. 1. put into a particular place; 2. to decline/wane)

Apart from the above-mentioned meaning of the word "set", do you know any other meanings? if yes, what does it mean?

2 responses

1. as in a group of things
2. as in commencing something

A group of things of the same kind that belong together and are so used.

Figure 10: Participant provided other meanings for the word (4)

Figure 11: No other interpretation for syntactic ambiguity (1)

Figure 12: No other interpretation for syntactic ambiguity (2)

> Headline 6: Viral post urging government to cancel Covid-19 booster shot programme uses misleading information
>
> The sentence can be interpreted as: (1. Viral post urging government to use misleading information to cancel Covid-19 booster shot programme; 2.Viral post urging government to cancel Covid-19 booster shot programme that uses misleading information)
>
> Apart from the above-mentioned meaning of the sentence, can you interpret in any other ways? If yes, what is the meaning?
>
> 0 responses
>
> No responses yet for this question.

Figure 13: No other interpretation for syntactic ambiguity (3)

4.2.1 Lexical Ambiguity (Definitions)

1. Expert **back** not jabbing kids under 12 ("Expert back not jabbing," 2021).

In this headline, the word *back* is identified to be a verb rather than a noun. It has multiple meanings, including *(a) to encourage somebody and assist them, (b) to support and concur with somebody or something, (c) to bet money, (d) to move backward, (e) to cover the back of something to protect it, (f) to be located at the back of something, (g) to assist in proving the truth of something* (Oxford University Press, n.d.-a), as well as *(h) opposite direction*, which was provided by a respondent in the questionnaire. It might also alternatively be interpreted as the phrasal verb "back up," which means to support or "back away," which means to retract. In this sense, the readers might understand the headline as follows:

i. Expert support not to jab kids under 12

ii. Expert retracting their support for not jabbing kids under 12

Since the definitions in both interpretations are diametrically opposed, guessing the meaning is not feasible in this headline because they might make an incorrect interpretation. Thus, the readers might need to read the entire text or merely scan and skim for the keywords to get the right interpretation. After reading the news, it implies that the exact interpretation of this headline is (i) as the content highlighted that the experts have thrown their support behind the government's decision to wait for the results and sufficient data on the effectiveness and safety of the Covid-19 vaccine for children under 12 before inoculating the group. It implies that the experts support not jabbing kids under 12 until more evidence is available to prove that the vaccine is effective and safe for kids under 12.

2. In hindsight, registration for Covid-19 vaccination could have been **staggered** (Anis, 2021).

In this headline, the term *staggered* is considered as an ambiguous word because it can be interpreted as either *(a) taken aback and astonished by what you told or something that happens* or *(b) arranged in such a way that not occurs at the same moment* (Oxford University Press, n.d.-b). One of the respondents also provided additional definition, which is *(c) walked or moved unsteadily*. As a result, the readers might interpret the whole sentence as follows:

i. In hindsight, the registration for Covid-19 vaccination could have shocked or surprised someone because something happened.

ii. In hindsight, registration for Covid-19 vaccination could have been better organized so that it occurred at different times.

iii. In hindsight, registration for Covid-19 vaccination could have been moved unsteadily.

If the readers just rely on the headlines, they might misinterpret them because three of the meanings seem logical. In order to get the right message, the readers should read the whole

article, not only the news headline. As the content indicated that "registration could have been carried out in phases or groups," it is possible to interpret the exact meaning as (ii).

3. Take steps to **secure** Covid-19 vaccines for children under 12 (Carvalho, 2021).

In this headline, the word *secure* is considered an ambiguous word because it could have multiple meanings, including *(a) acquiring or attaining something with a great deal of effort, (b) attaching or fastening something,* and *(c) protecting something from danger* (Oxford University Press, n.d.-c). Having more than one interpretation could make it difficult for the readers to determine the actual interpretation. They might interpret it as:

i.   Take steps to protect Covid-19 vaccines for children under 12

ii. Take steps to acquire or attain the Covid-19 vaccines for children under 12

The readers are likely to understand the headline as the definition (i), which is to protect Covid-19 vaccines for children under 12. However, the exact meaning would be *to acquire Covid-19 vaccines for children under 12* as noted in the content, "take proactive action to finalize the purchase of Covid-19 vaccines for children."

4. The success of the vaccination **drive** has revived country's economy ("The success of vaccination drive," 2021).

In this headline, the word drive is regarded as an ambiguous word because it can be interpreted in a variety of ways, including *(a) a car journey, (b) a person's strong desire or need, (c) a long hard hit or kick, (d) computer storage that stores large amounts of information* (Oxford University Press, n.d.-d), as well as *(e) an organized effort by a group of people to accomplish something*, which was provided by one of the respondents. Hence, the readers might interpret the headline as follows:

i.   The success of the vaccination campaign resulted from an organized effort by a group of people to achieve a goal, thus reviving the country's economy.

ii.   Forcing individuals to be vaccinated has been successful and revived country's economy.

When it comes to *drive*, the readers might first perceive it as a verb and understand it as "driving a car," leading them to interpret the headline as "drive-through to get the vaccination." The term *drive*, on the other hand, is a noun rather than a verb in this context. Therefore, the actual meaning of this headline is (i), as the content indicated "the success of the National Covid-19 Immunization Programme has allowed the full reopening of the economy."

5.   PPV **set** for booster rollout (Zainal, 2021).

In this headline, the word *set* has multiple meanings, including *(a) to prepare or organize something, (b) to fix something that others strive for, (c) to make a decision on something, (d) to start something occurring, (e) to become rigid* (Oxford University Press, n.d.-e). Two of the respondents proposed two meanings respectively, which include *(f) a group of things or commencing something,* and *(g) a group of objects of the same sort that belong together and are used as such.* Since there are multiple meanings for this word, the readers might interpret the headline as follows:

i.   PPV prepare or organize for booster rollout

ii.   PPV make a decision for booster rollout

iii.   PPV is located somewhere for booster rollout

If the readers are unaware that PPV stands for vaccination centres, they might even interpret the headline as PPV as an object, attached with "set", implying that it is a group of identical objects that belong together for the booster rollout. The meaning of the word set in this headline is "prepare or arrange for something" because the content wrote "ready to reopen to support booster vaccination drive."

4.2.2 Syntactic Ambiguity

1. Debunk anti-vaccine myths with scientific facts (Benjamin & Devi, 2021).

(a)

```
                              S
          ┌───────────────────┼──────────────────────┐
         VP                   │                       PP
          │                   NP                    ┌──┴──────┐
          │               ┌───┴────┐                │         NP
          V              Adj        N               P       ┌──┴───┐
          │               │         │               │      Adj      N
          │               │         │               │       │       │
       [Debunk]      [anti-vaccine myths]         [with   scientific facts]
```

(b)

```
                                    S
            ┌───────────────────────┴──────────────┐
           VP                                       NP
            │                                  ┌────┴────┐
            │                                  NP        PP
            │                              ┌───┴───┐   ┌──┴──────┐
            V                             Adj      N   P          NP
            │                              │       │   │       ┌──┴───┐
            │                              │       │   │      Adj      N
            │                              │       │   │       │       │
         Debunk                      [anti-vaccine myths with scientific facts]
```
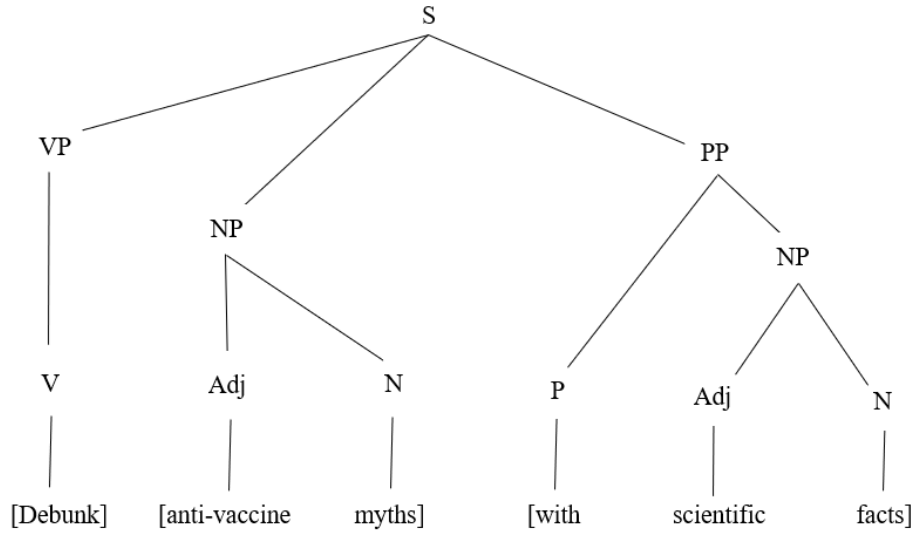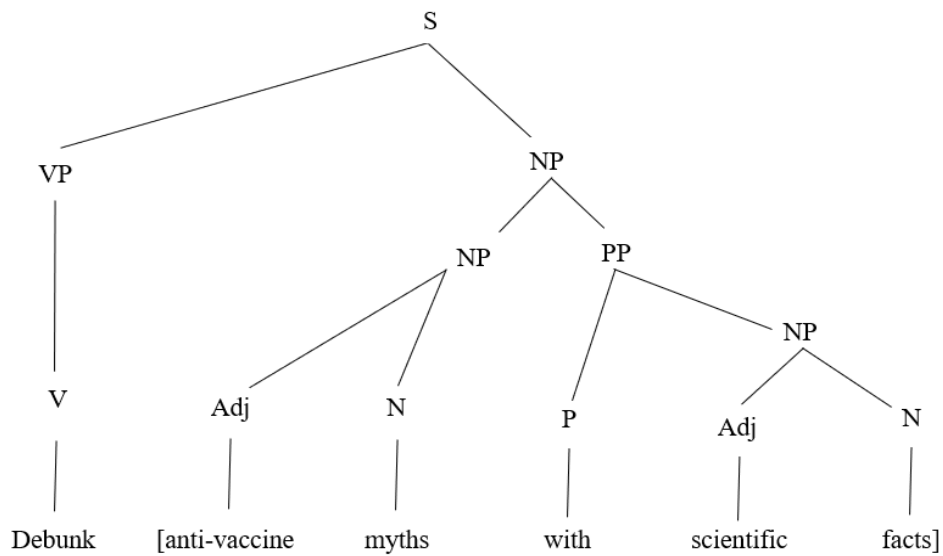
The structure above indicates two different interpretations of the sentence "debunk anti-vaccine myths with scientific facts." From the first structure (a), the interpretation of the sentence is "*using the scientific facts to debunk anti-vaccine myths.*" While the second structure (b), the interpretation in the sentence is "*debunk anti-vaccine myths that contained scientific facts.*" However, the author's intended meaning of the headline is the interpretation from the

structure (a) because the content indicated "*social media content from experts debunking these myths and sharing their experiences.*"

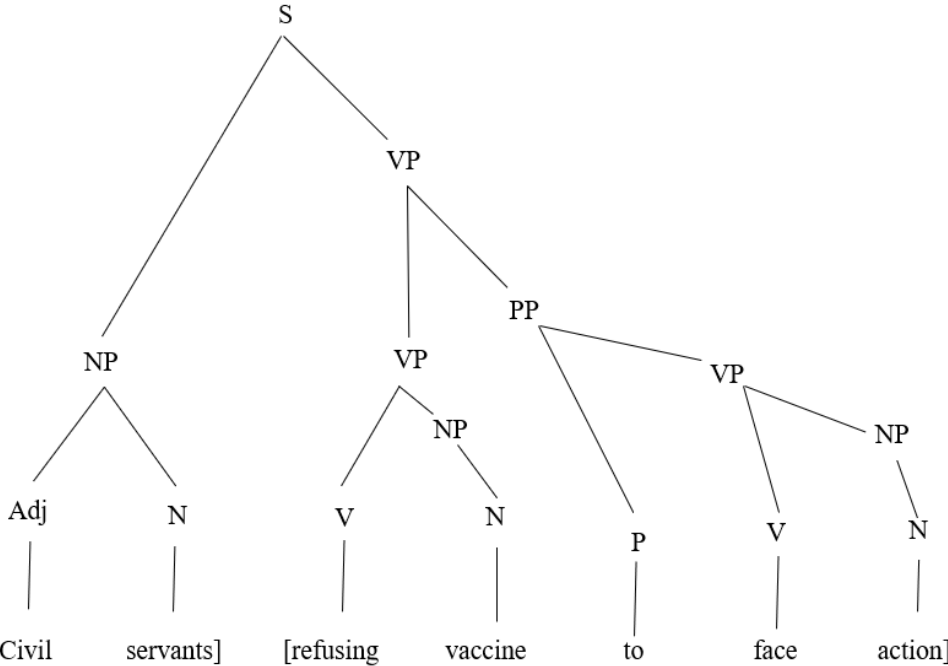2. Civil servants refusing vaccine to face action ("Civil servants refusing vaccine," 2021).

(a)

(b)
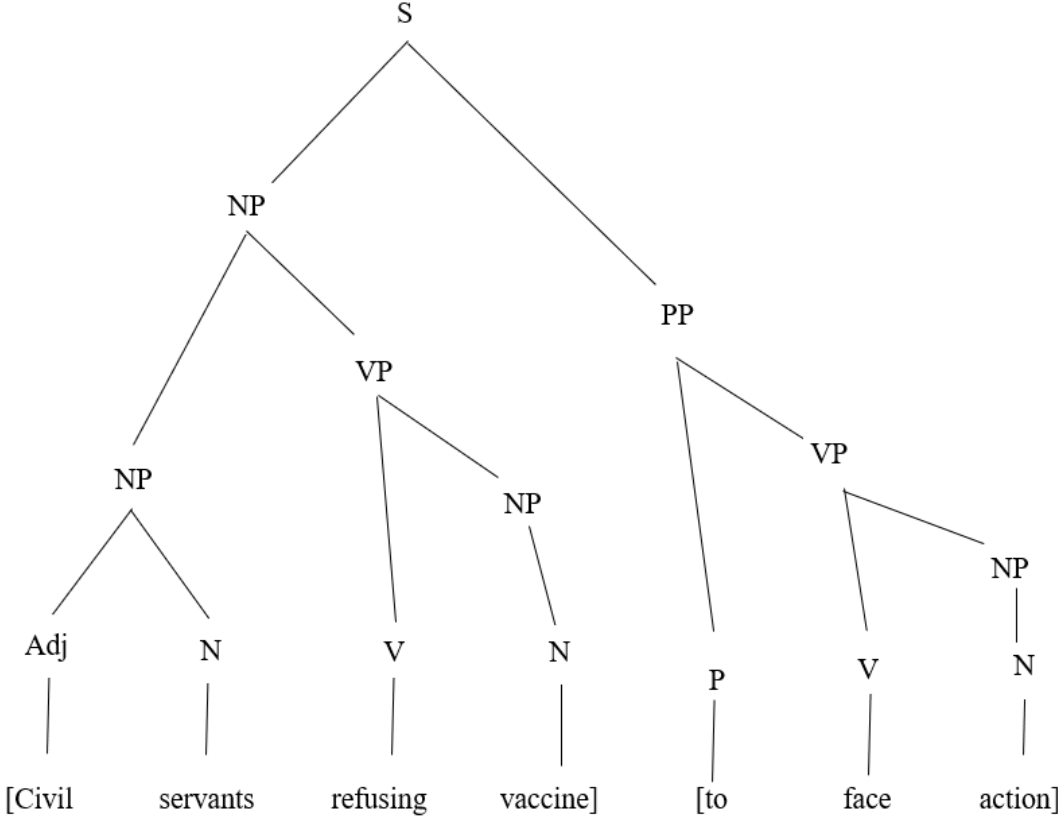
The structure above indicates two different interpretations of the sentence "civil servants refusing vaccine to face action." From the first structure (a), the interpretation of the sentence is *"the civil servants who refused to take the vaccine had to face something unpleasant, difficulty or legal proceedings."* Another interpretation might be related to the action done by the anti-vaxxers. Anti-vaxxers are those who are opposed to vaccination and believe the vaccine is ineffective, thus they propagate that the vaccine is harmful to the people and blame the side effect of the vaccine. Consequently, interpretation (b) is *"the civil servants refuse the vaccine in the face of any action done by the people."* However, the author's intended meaning of the headline is the interpretation from the structure (a) because the content indicated "civil servants who continue to refuse Covid-19 vaccination without a valid reason will face disciplinary action."

3. Viral post urging government to cancel Covid-19 booster shot programme uses misleading information (Albakri, 2021).

(a)

(b)
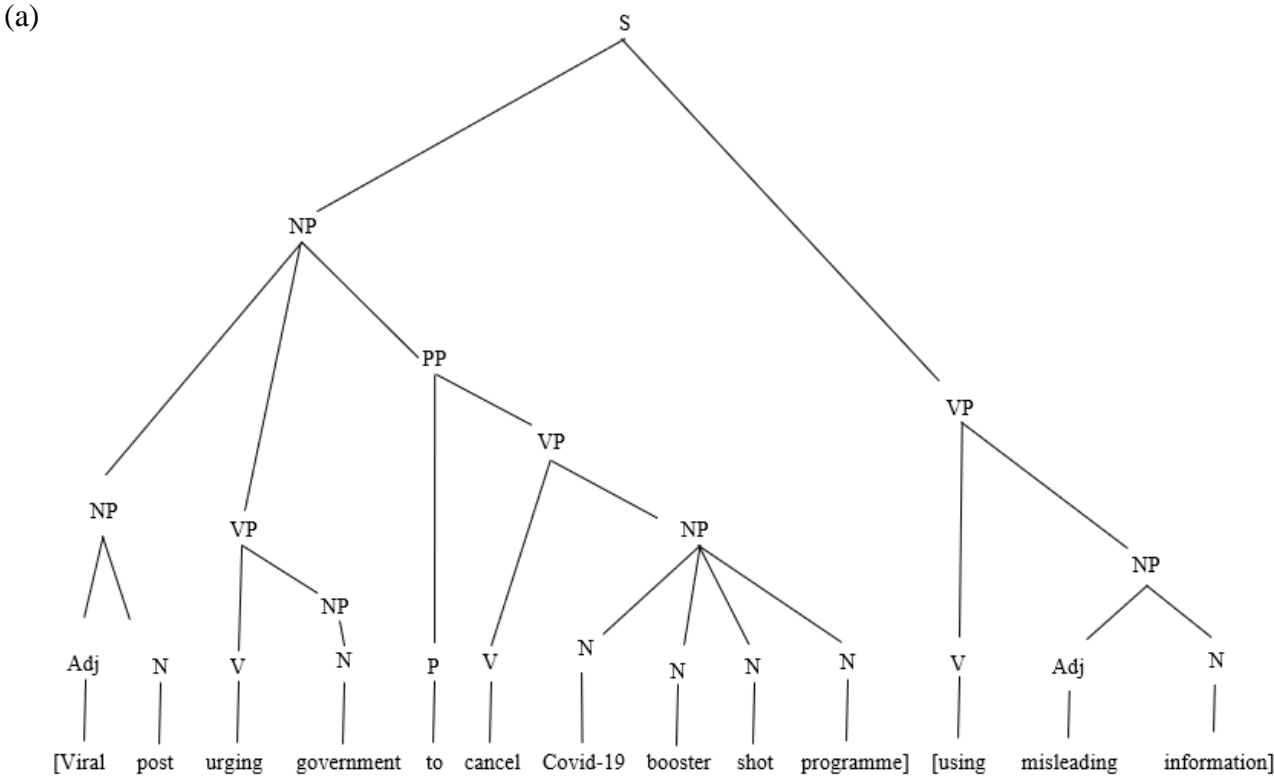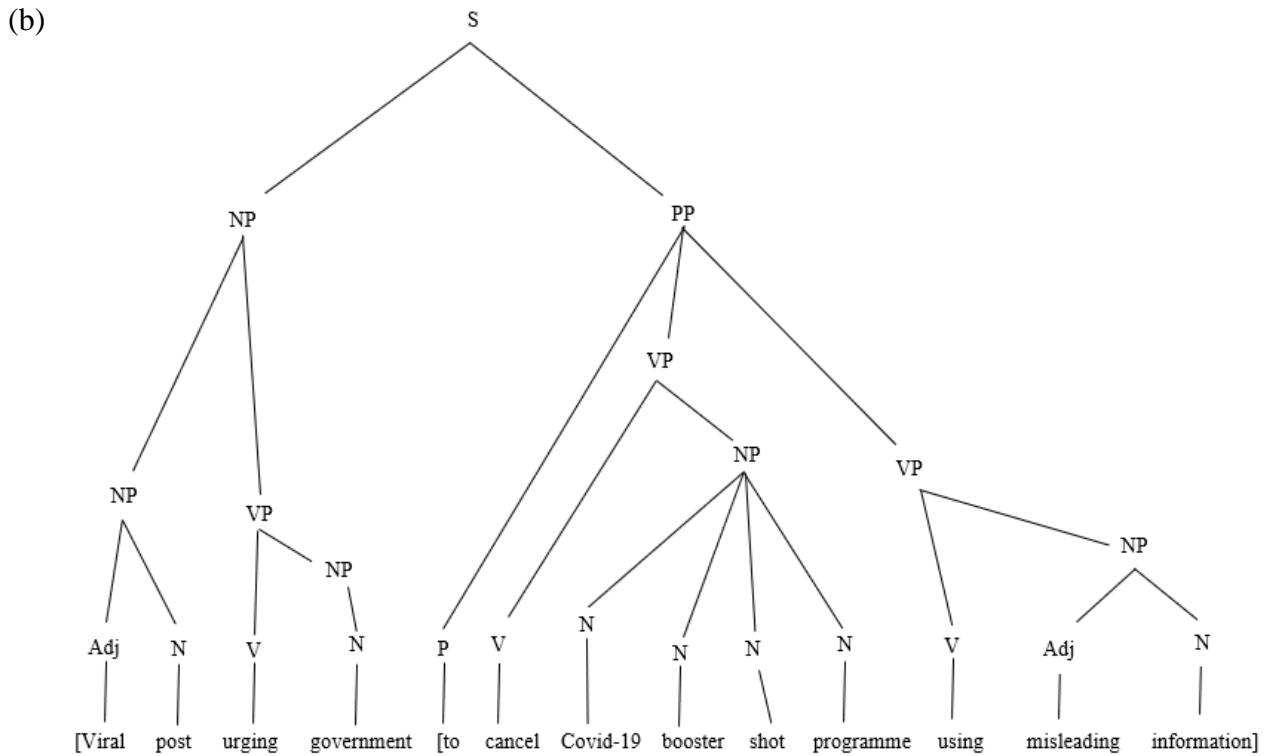
The structure above indicates two different interpretations of the sentence "viral post urging the government to cancel Covid-19 booster shot programme using misleading information." From the first structure (a), the interpretation of the sentence is "*the viral post urging the government to use the misleading information to cancel the Covid-19 booster shot programme .*" While the second structure (b), the interpretation in the sentence is "*the viral post using misleading information to urge the government to cancel Covid-19 booster shot programme.*" However, the author's intended meaning of the headline is the interpretation from the structure (b) because the content indicated the viral post asked the Malaysian government to stop its Covid-19 third dose vaccination programme and the news clarified that the website spread the propagating misinformation to the public.

From the findings above, RQ1 can be answered. To summarise, these were the lexical ambiguity and syntactic ambiguity that appeared in the vaccine news headlines in The Star

from October to December 2021. The most dominant type of ambiguity that emerged in the news headlines was lexical ambiguity and followed by syntactic ambiguity.

4.3 Interview

4.3.1. Participants' opinions on the news headlines

Based on the semi-structured interview, six designated questions and five headlines (*see appendix C*: *interview questions*) were given to the respondents. The responses were sorted into two parts, which are "easy" and "difficult". In the theme of "easy," they rarely encountered challenges in reading and comprehending the headlines. In contrast, in the theme of "difficult," they faced challenges when reading and comprehending the headlines.

Participants	Easy Category
C	- "I can understand easily." - "I did not face any challenge."
F	- "I can straightaway to the conclusion after reading the news headlines." - "Not really face any challenge." - "If the headline is too short, I don't think that will be a problem for me."
G	- "Quite informative, straight to the point."
H	- "So far no facing any challenges."
I	- "Not facing any challenge." - "I can understand clearly."

Table 4.2 Easy category

The "easy" category involved respondent C, respondent F, respondent G, respondent H, and respondent I. It signifies that five of these respondents did not encounter any challenges or obstacles in reading the news headlines. According to respondent C, the headlines serve as the summary of the information, so sometimes the respondent just reads the headline and assumes what it is trying to say, but then reads the content to validate the assumption. Respondent F reported that the headline is understandable despite the fact that it is too short, but the respondent feels confused if the authors use a difficult term that is not popular in Malaysia. However, it is uncommon because The Star news is based in the Malaysian context, unless it is international news.

Furthermore, respondent G highlighted that the headlines could immediately grab the attention of those interested in certain topics. For instance, if the readers want to know more about the current situation in a certain area, they will look at the headlines themselves. The respondent feels that the headlines are very direct, straight to the point, and bring the readers to know more about what is trying to convey. Moreover, the news headlines are of the right length, which does not too long to be ignored and not too short to be understood. Respondent H stated that only the most appealing headlines will be chosen and looked into the details. Most of the time, the readers prefer headlines that are fascinating and capture their attention. As an English Education major, it is easy for the respondent to interpret the headlines. Finally, respondent I also agreed that the headlines are easy to interpret because they reflect what the content of the headlines is related to.

Participants	Difficult Category
A	- "I don't understand the meaning of some words, but after I read the content, I can relate the headlines to the content easily."

B	- "Quite direct, I can understand when I read the papers, but sometimes if you just let me see the headlines without the content, it is difficult, especially when the meaning of the word is ambiguous." - "Especially the news headline used to attract people to click into it but the news is not what stated at the headline"
D	- "Do not understand the meaning of the words, especially in the beginning stage."
E	- "It depends on the situation, sometimes I find it difficult to understand what are the meaning of the news headlines."

Table 4.3 Difficult category

The above table is the "difficult" category, including respondent A, respondent B, respondent D, and respondent E. In this category, the respondents feel that some of the news headlines are complex to interpret and they require to take effort to understand because of the unfamiliar words. Both respondent A and respondent E will look for the dictionary, while respondent B will read the news and check if the assumption is correct. Furthermore, participant D read the news to expand vocabulary and know more about the current issue. The participant started reading the news during secondary school for the sake of preparing for SPM after acknowledging having low English Language proficiency and limited vocabulary knowledge.

4.3.2 Participants' interpretation on the news headlines

Headlines	Correct interpretation

(a) In hindsight, registration for Covid-19 vaccination could have been staggered	Participant A: Registration for Covid-19 vaccination might meet some problems Participant C: The registration for Covid-19 vaccination has some mistake Participant G: There is some problem of the registration for Covid-19 vaccination Participant H: The registration for the vaccination have met some problems
(b) PPV set for booster rollout	Participant A: Booster PPV is set up Participant B: The center that given out the booster is ready Participant C: The vaccination center is ready to give out booster shot Participant F: Vaccination centre has now starting to provide booster vaccination dose Participant G: They set up the booth to get preparation for booster vaccination
(c) Take steps to secure Covid-19 vaccines for children under 12, PAC tells govt	Participant C: The government should take steps to get the Covid-19 vaccinations for children

(d) Viral post urging government to cancel Covid-19 booster shot programme uses misleading information	Participant A: Viral posts tend to use some clickbait information to make government cancel booster dose vaccination activity
	Participant C: There is a post with misleading information that can make people do not want to get their booster shot to urge the government to cancel the booster shot programme
	Participant F: A post online which has got the public's attention is using misleading information to ask government stop providing booster vaccination
	Participant G: The viral post is shown to say that uses misleading information in order to make the government to cancel the Covid-19 booster shot
	Participant H: Fake news or posts on social media that going on viral makes the public that the booster is not good
	Participant I: The viral post uses wrong information to urge the government to cancel the Covid-19 booster shot programme (it is using the wrong information to tell the government to do something)
(e) Civil servants refusing vaccine to face action	Participant A: Civil servant that refuse to be vaccinated will be facing some punishment
	Participant B: The civil servants who didn't want to get vaccination face punishment

	Participant C: Civil servants do not want to get vaccination will face punishment or consequences
	Participant D: Civil servants refuse vaccine, so they will get punishment
	Participant E: Civil servants refusing vaccine have to face the punishment
	Participant F: Government workers who are refusing to get vaccination will have consequences
	Participant G: Civil servants refuse to get vaccine will face action
	Participant I: The civil servants who refuse to be vaccinated will be punished

Table 4.4 Correct interpretations

In headline (a), the respondents did not provide the meaning of "staggered." Instead, they interpreted the meaning as "the registration might meet some problems or make some mistakes." The reason that they did not provide the meaning of this term is that they did not understand the context and what was going on. Since the exact meaning of this headline is that the vaccine should be carried out in phrases or groups, it is considered a problem as well. After the readers read the whole content, they can understand what is the problem as respondent G mentioned that this headline is to pull the readers' attention to the meaning of "staggered" and suggest them to read further down.

Moving on to the headline (b), the participants used the phrase "set up" because this is the first interpretation when they first see the word "set." While "set up" has the meaning of making something ready to use, the answer is considered correct. There was only participant C interpreted the headline (c) accurately. Next, only six participants interpreted the headline (d) in the correct way. Again, participant D highlighted that it is impossible to ask the government to cancel the Covid-19 booster shot programme by using misleading information, so the only way to explain this sentence is to use misleading information to ask the government to cancel the Covid-19 booster shot programme. Finally, all the participants interpreted the headline (e) correctly, except participant H. The reason they get the headline correctly is that the vaccine is an object and it cannot face punishment.

4.3.3 Wrong interpretation of the news headlines

Headlines	Wrong Interpretation
(a) In hindsight, registration for Covid-19 vaccination could have been staggered	Participant B: The registration should done in a clever way Participant D: The registration for Covid-19 vaccination is full Participant E: The registration for Covid-19 vaccination could have been a mess Participant F: The registration for covid 19 vaccination can be much more faster Participant I: The registration will not be that excellent
(b) Take steps to secure Covid-19 vaccines for	Participant A: Help to protect children under 12 by registering vaccine for them

children under 12, PAC tells govt	Participant B: Few steps to do to let children under 12 to get vaccine
	Participant D: Take steps to protect Covid-19 for children under 12
	Participant E: Covid-19 vaccines are ready for children under 12
	Participant F: Public is encouraged to get children who are under 12 to get vaccination as soon as possible
	Participant G: Tell governments what should they do to ensure that the children to get vaccine
	Participant H: Take steps to protect children under 12 when they are taking the vaccinations we need to like be care a bit
	Participant I: Some steps that the parents need to take to help their children make an appointment for the Covid-19 vaccine
(c) PPV set for booster rollout	Participant D: PPV set ready for booster rollout
	Participant E: PPV set for booster is launched
	Participant H: The vaccine place for booster is settled outside
	Participant I: The PPV set are ready for booster rollout
(d) Viral post urging government to cancel Covid-	Participant B: A post on internet give opinion on government

19 booster shot programme uses misleading information	Participant D: Viral post urging government use misleading information to cancel Covid-19 booster shot programme Participant E: Viral post is asking government to cancel Covid-19 booster shot programme with misleading information
(e) Civil servants refusing vaccine to face action	Participant H: The government are taking action for those citizens who refuse to take the vaccination

Table 4.5 Wrong interpretations

The table above showed the incorrect interpretations from the participants. In the headline (a), the participant did not know the definition of the word "staggered," so they guess the meaning. For example, respondent D reported that "I don't know the meaning of the staggered" and gave the answer as "full." This might also be because the context is unknown, and they did not know what "staggered" implies in this sentence. Participant I also indicated that "there won't be so many people who will register because of multiple reasons."

Except for participant C, all participants offered the incorrect interpretation of headline (b). The exact meaning of this headline is about the government obtaining vaccines for children by taking proactive action to finalize the purchase. Instead of using the word "obtain," the participants interpreted it as "protect." When they read the headline, the first that came to their mind of the word "secure" is protect from harm. Additionally, the participants' perception places children as the major aim, yet the headline emphasized securing Covid-19 rather than children. This might possibly be because they overlooked the entire sentence.

There are various reasons why people obtain the erroneous meaning for the headline (c). Participant E assumed that the PPV was part of the word set. One of the interesting reasons

that the participant misinterpreted PPV and set was because participant E seldom reads vaccination news and only focuses on the entertainment part. The participant was not well-informed about the background and lacked share knowledge of the topic. Besides, participant I reported that the headline was too short to analyze. The shortness of the headlines does not give the readers the opportunity to become familiar with the background of the headline. In headline (d), participant D and participant E provided false interpretations because of the ambiguous sentence structure. Lastly, only participant H misinterpreted the whole meaning of headline (e) due to the failure to read the entire sentence.

Back to the previous part, which is easy-and-difficult categories, there were participants who expressed that they can understand the headlines even without the content, yet they still made mistakes and misinterpreted the headlines. From the findings, participant C was the only one who interpreted all the headlines correctly. The participant also reported that it required a certain amount of time to understand the headlines. Participant F and participant H indicated confidently that it is easy to interpret the headlines, but their interpretations contained errors. According to participant I, some of the headlines were too short and caused confusion. Furthermore, participant G pointed out that it is simple to interpret the headlines, but it is crucial to comprehend what the content is about.

While in the "difficult category," participant A reported that it is difficult to interpret the headlines and analyze what they are talking about without the content, but still managed to interpret most of the headlines correctly. The participant added that it may be because of the news reading habit. Participant B and participant D stated that they did not understand certain words, thus leading to misinterpreting the meanings, whilst participant E stated that it is arduous to understand without the context given.

4.4 Conclusion

This chapter aimed to reveal the results and analysis based on the dictionary, questionnaire, and interview. The discussion, limitations, recommendations for future study and conclusion will be presented in the next chapter.

CHAPTER V

DISCUSSION & CONCLUSION

This chapter comprised a discussion of the findings obtained in the research study, the limitations, as well as recommendations for future research. The findings are discussed with relevance to past studies in terms of similarities and differences, and the new data discovered to further build upon the understanding of the impact of lexical ambiguity and syntactic ambiguity on the readers. In addition, the limitations of this research and recommendations for future research are presented.

5.1 General discussion

Starting with the methodology employed in this research, which was significantly different from others by revealing the results using percentages and frequency (Almahameed, 2018). Instead, this study employed semi-structured interviews to elicit more detailed answers from the participants, which had not been done in the previous studies. Additionally, it was unlike the study conducted by Irwandi and Ismiati (2019), the students were requested to distinguish between lexical ambiguity and syntactic ambiguity. In this research, the participants were given headlines that were all ambiguous. To comprehend the headlines, they must rely on their knowledge of the words, phrases, or sentence structures. Therefore, it might provide distinctive and newly-discovered data.

Not surprisingly, the vaccine-related news headlines in The Star contained lexical ambiguity and syntactic ambiguity. Compared with syntactic ambiguity, the dominant type of ambiguity that appeared in the news headlines was lexical ambiguity, which coincided with the findings of Osunnuga (2013) who explored the ambiguity in the headlines of Yoruba newspapers. According to Wasow, Perfors and Beaver (2005), the occurrence of lexical ambiguity is quite widespread. The number of definitions supplied for terms in standard

dictionaries provides a rudimentary indicator of their frequency of occurrence. To be sure, lexicographers' attempts to deal with the ambiguity of most natural language terms are reflected in many of the fine meaning differences found in dictionaries. Genuine polysemy, on the other hand, is the rule rather than the exception, especially among often used terms.

However, it is rather unexpected that the participants provided the correct interpretations, which contradicted the study done by Irwandi and Ismiati (2019), which concluded that the students have poor knowledge of the exact meaning of the word due to the ambiguities. Indeed, there were participants who interpreted the headlines incorrectly but the analysis showed that it was because they did not understand the meaning completely rather than ambiguous meanings in a word or sentence. The lexical ambiguity and syntactic ambiguity solely affect a minor part of the participants such as the headline (b) and headline (d) in *table 4.4 wrong interpretations*. In the process of interpretation, most of the participants feel confused but they still get the exact meaning of the words or sentences. Speaking of the relationship between education background and the interpretation of lexical ambiguity and syntactic ambiguity, there is no difference between them.

From the findings, it can also be evident that the people do not usually consciously aware of a word or sentence has multiple meanings, regardless of the participants from the questionnaire who opted for "no" or interview. This might be due to the assistance of the context, most of what they hear or read is ambiguous is not immediately apparent (Birnbaum, 1985). Demir (2020) also mentioned that the readers activate one underspecified sense of the word and use context to get the most possible meaning because contextual information can influence language processing. One situation in which people do become explicitly aware of lexical ambiguity is when understanding puns that are deliberately constructed to make reference to both meanings of a lexically ambiguous word (Rodd, 2017).

5.2 Limitations and recommendations for future research

There are several limitations that have been identified in this study, including the topic of the headlines chosen and the participants.

The first limitation found in this study was the selection of the topic, as it was only limited to the topic of vaccination. This is because it is one of the hot topics in society today due to Covid-19. Therefore, it does not mean that the other topics would generalize the same results. Another limitation lies in the small number of participants. Due to the time constraints, the researchers were unable to find other participants. Only nine participants from different educational backgrounds and readers of The Star news were selected. As such, the research findings may not be applicable to the entire population of the nation.

Taking into account the limitations of the research, some recommendations for future research could be introduced to fill the current research gaps. The researchers could explore other topics in the news headlines such as entertainment, crime, sport, living, and so on because different people read the news sections differently. In addition, researchers can examine a more dependable larger sample to improve the reliability of the data. Of course, not only to investigate the readers but also the non-readers to determine whether there is a difference in the findings produced between them. Also, they can examine how these ambiguities affect the community.

5.3 Conclusion

Overall, the major purpose of this study is to find out the lexical ambiguity and syntactic ambiguity in the vaccine news headlines of The Star and how it impacts readers' interpretations. The data revealed that both lexical and syntactic ambiguity existed in The Star news, but they did not affect the participants' interpretations of the headlines, despite being confused and

taking an amount of time to think about what the headlines meant. However, there is still room

for improvement in this study, with recommendations as provided in *5.2 limitations of the study*.

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Appendix A: Questionnaire

Lexical Ambiguity					
Headlines	No	Yes without giving meaning		Yes with giving meaning	
		The words given	The other words	The words given	The other words
1. Expert **back** not jabbing kids under 12	0	2	0	1	0
2. In hindsight, registration for Covid-19 vaccination could have been **staggered**	0	1	1	1	0
3. Take steps to **secure** Covid-19 vaccines for children under 12	0	3	0	0	0
4. The success of the vaccination **drive** has revived country's economy	1	0	1	1	0
5. PPV **set** for booster rollout	0	1	0	2	0

Syntactic Ambiguity		
Headlines	No	Yes
Debunk anti-vaccine myths with scientific facts, says expert	1	2
Civil servants refusing vaccine to face action	0	3

Viral post urging government to cancel Covid-19 booster shot programme uses misleading information	0	3

Viral post urging government to cancel Covid-19 booster shot programme uses

misleading information

Appendix B: Semi-structured Interview

1. How do you feel what you read the news headlines?

2. Do you face any challenges when reading the news headlines?

3. What challenges have you been facing when reading the news headlines?

4. How would you interpret the news headlines if you face difficulty?

5. If a word or sentence in the headline got more than one meaning and the person misinterpret it, do you think that he/she will misunderstand the whole stories as well? Why?

6. How would you interpret these headlines?

    I. In hindsight, registration for Covid-19 vaccination could have been staggered

    II. Take steps to secure Covid-19 vaccines for children under 12

    III. PPV set for booster rollout

    IV. Viral post urging government to cancel Covid-19 booster shot programme uses misleading information

    V. Civil servants refusing vaccine to face action

Appendix C: Participants' Educational Background

Participants	Educational background
Participant A	Bachelor of Science (Hons) Quantity Surveying
Participant B	Bachelor of Mass Communication (Hons)
Participant C	Bachelor of Science (Hons) Actuarial Studies
Participant D	Have no prior certification of higher education
Participant E	Have no prior certification of higher education
Participant F	Have no prior certification of higher education
Participant G	Bachelor of Arts (Hons) English Language
Participant H	Bachelor of Arts (Hons) English Education
Participant I	Bachelor of Arts (Hons) English Language