

Mental Health Discourse of Malaysian Women on Social Media

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ABSTRACT

This study delves into the psychological well-being of Malaysian women amidst the unprecedented challenges posed by the COVID-19 pandemic. By examining the discourse prevalent among Malaysian women on social media, particularly on Facebook, we seek to gain insights into their experiences and concerns during the pandemic. Public posts made during the COVID-19 period were systematically collected and assembled into a corpus utilising Lancsbox software. Through a careful analysis of this corpus, the study unveils the frequency and patterns of the topics written by Malaysian women. Moreover, it explores the contexts that shape these posts. Our research aims to shed light on the mental and emotional landscape of Malaysian women as reflected in their online interactions. The findings from this investigation hold the potential to offer valuable guidance to women and relevant stakeholders, contributing to a better understanding of how to support women's mental health within the realm of social media.

Keywords: Corpus linguistics, discourse analysis, mental health, social media, COVID-19

1.0 INTRODUCTION

There has been a growing concern for people's mental health in recent years, and depression is one of the leading mental disorders worldwide. The World Health Organization (WHO) reported in March 2022 that the number of mental health issues increased dramatically following the coronavirus (COVID-19) disease pandemic in late 2019. The figure corresponds to the findings of Santomauro *et al.* (2021) on their Global Burden Disease (BGD) study. According to their findings, the COVID-19 outbreak has resulted in a 27.6 percent increase in major depressive disorder (MDD) cases and a 25.6 percent increase in anxiety disorder cases globally.

On 18 March 2020, Malaysia imposed a national lockdown known as the Movement Control Order (MCO), and people were required to remain at home. Working from home entails not only carrying out their work duties as usual at home but also monitoring their children's school lessons, if they have children. Affected individuals were expected to manage household chores while working. As a result, many people have felt burdened and stressed during the pandemic. The Ministry of Women, Family, and Community Development of Malaysia (KPWKM) reported that 145,173 distress calls were received by various government agencies between March 25 and May 20, 2021. 85.5 percent of the calls were for emotional support and counselling for mental health issues such as severe stress, anxiety, depression, abuse, and suicidal behaviour.

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These emotions were felt more strongly by women than by men. According to a survey conducted in Malaysia by Vimala *et al.* (2021), 37 percent of the women polled reported experiencing emotional distress, with 33 percent experiencing depression and 24 percent experiencing stress, especially when the MCO was in place. Since these women's movements and physical interactions were restricted, they tended to share their thoughts and activities on social media. It helped them to manage their emotions by receiving and providing much-needed online support on social media, which alleviated some of their psychological distress during the lockdown (Adlina *et al.*, 2022).

As Trifan *et al.* (2020) point out, one of the most popular ways to express oneself is through written digital communication. It usually happens on social media platforms like Facebook, X (formerly known as Twitter), Instagram, and Telegram. Growing awareness of expressing oneself and the significance of helping people strengthen their mental resilience at the start of a pandemic has been observed in recent years, especially during the COVID-19 pandemic. As quarantine, study, and work-from-home policies were enforced, people updated their activities and shared their feelings as well as their experiences on social media.

The COVID-19 pandemic has had an impact on people's mental health all over the world, regardless of their socioeconomic status or background. Many people use social media to express their emotions and experiences. Pennebaker *et al.* (2003) suggested that the words used in people's language expressions can reveal information about their psychological processes. Despite the growing interest in qualitative research in mental health, there remain underexplored studies that investigate the language associated with it (Price, 2022).

Previous studies (Vioules *et al.*, 2018; Nadeem *et al.*, 2016; Feuston and Piper, 2018) developed corpora that consisted of text collections from Twitter and Instagram. However, to the researchers' knowledge, very minimal study had been done to examine a specialised corpus that contains public postings on Facebook regarding women's mental health issues during the COVID-19 pandemic period. Little is currently known about the psychological states of Malaysian women through the language they use on social media, especially during a pandemic. Hence, the following questions will be addressed in this study:

1. What are the frequency lists of the specialised corpus?
2. What are the contexts and collocations of mental health-related words in the specialised corpus?

2.0 LITERATURE REVIEW

Corpus Linguistics

Corpus linguistics has a major impact on the field of linguistics as well as on language teaching and learning, lexicography, and language technology as it can identify language patterns.

There are many diverse types of corpora available for analysis today, including both written and spoken texts in a variety of languages. A corpus can be a reference corpus that contains millions of words, such as the BNC and COCA corpora. It can also be smaller, and it is usually specialised to certain topics, registers, durations, genres, and so on (Flowerdew, 2014). Researchers continue to use corpus linguistics to investigate a wide range of topics, from syntax and grammar to sociolinguistics and discourse analysis.

In the field of health communication, corpus linguistics has been used to study the language used in health-related fields, such as newspaper articles on dementia (Brookes, Atkins, and Harvey, 2021), patient–doctor information through phone calls (Adolphs *et al.*, 2004), and online support groups (Brooks and Hunt, 2021). The corpora do not only include terms related to diseases, treatments, and medications, but also include terms related to the emotional and psychological well-being of individuals. This information can be used to develop more effective health communication materials, such as patient information leaflets, website content, and awareness campaigns.

Corpus linguistics can also be used to examine the language of health-related news articles and identify trends and patterns in the way certain health-related topics are discussed. For example, Nor Fariza, Novelia, and Hilwa (2021) conducted a study on the portrayal of mental health in Malaysian English online newspapers. They discovered that the majority of the mental health-related news reports they examined were positive and used appropriate wording.

In essence, corpus linguistics can be a powerful tool to understand how language is used in health communication contexts. It can help in the development of effective communication strategies that target specific audiences and address their needs and concerns.

Social Media Corpus Development

Of late, social media has been one of many fields studied in corpus linguistics. The study of depressed users' writings and actions on social media has begun to apply computational tools (Wolohan *et al.*, 2018). Social media presents a new chance to transform real-time assessments of a broad spectrum of people's emotions and ideas. Some examples of popular social media data for corpus development are Twitter, Facebook, and Instagram.

Coppersmith *et al.* (2014) investigated four mental disorders in tweets, and a dataset of users who attempted suicide was developed in subsequent studies. Nadeem *et al.* (2016) identified depression on Twitter using the Bags of Words approach, while Vioules *et al.* (2018) used natural language processing to detect Twitter posts with suicidal content. This research shows that Twitter texts, even brief ones, can provide insight into the connection between language and mental health problems.

Besides that, over a six-month period, Feuston and Piper (2018) manually collected Instagram posts through semi-structured interviews and digital ethnography. They attempted to determine how Instagram users express their feelings about mental health and illness. On top of that, they discussed the practical and ethical implications of researching the expression of mental health and illness online. Apart from the short text corpora mentioned previously, longer-form content or texts for corpora have also been explored. For instance, Cohan *et al.* (2018) built a large self-reported depression dataset from a social media platform known as Reddit.

Women and Mental Health

While both men and women can suffer from mental health disorders, studies have shown that women are more likely to suffer than men (Gulland, 2016). The COVID-19 pandemic has exacerbated the state of mental health, with women reporting higher levels of anxiety and depression than men in many cases. They also have a higher inclination to disclose their feelings than males (Valkenburg *et al.*, 2011).

A survey on stress levels done by Afridi (2021) in the Indian populace during the COVID-19 pandemic reported that 66 percent of women were stressed, compared to 34 percent of men. Similarly, a study in

China revealed that women reported anxiety and depression symptoms more frequently than men during the outbreak (Hou *et al.*, 2020). One of the primary reasons for this is that women are more likely to experience increased stress and caring responsibilities as a result of school closures, distance learning, and working from home. The lack of support services, combined with a lack of physical opportunities and social interactions, has left many women feeling overwhelmed and isolated.

According to the data taken from the Malaysian National Health and Morbidity Survey (NHMS), it was also found that women experience mental health issues at a higher rate than men. Nevertheless, Yong (2019) discovered that the experiences of people with mental health problems, particularly women, are poorly understood and frequently neglected or ignored. With the outbreak of COVID-19, it is important to further investigate ways to help these women, who experience mental health problems, become more resilient when facing adversity in the future.

3.0 METHODOLOGY

This study creates a smaller, specialised corpus that typically represents one or more narrowly defined genres and registers. It differs from general corpora, which usually contain millions of words. An example of a specialised corpus is done by Feuston and Piper (2018), in which they gathered over 3,000 top posts and most recent posts from five hashtags related to mental illness on Instagram, such as depression, anorexia, anxiety, bipolar, and mental illness. The collection of posts took about 6 months.

Similarly, this study creates a corpus of public group posts related to mental health, especially stress, anxiety, and depression, written by Malaysian women. Facebook was chosen because it was the most popular social media platform in 2020. For this study, the collection period was set from 18 March 2020 until 1 November 2020. The size of the corpus was determined by the posts collection period, which was 32,127 tokens.

The corpus encompasses both Malay and English. One of the main reasons for the use of dual languages in social media interaction in Malaysia is code-switching. Code-switching is the practice of alternating between languages within a conversation or text. In Malaysia, for example, people may use English, Malay, or a combination of both to cater to their language proficiency, express themselves more effectively, or reflect their language preference (Alinda, 2019). These individuals may seamlessly switch between languages in their social media interactions.

The corpus is developed and analysed to look for patterns in the language used by women experiencing psychological distress. To collect the data, a web scraping tool (API) was used. This tool converts the web sources to plain text, and once the plain text version of the data was obtained, it was uploaded into the #LancsBox software to be filtered and analysed.

4.0 FINDINGS AND DISCUSSION

In this section, the findings from the study are presented alongside a discussion of their implications and interpretations. This integrated approach aims to provide a cohesive understanding of the mental health

challenges faced by individuals, as revealed through their word choices and the analysis conducted. The study developed and analysed the following specialised corpus, namely Corpus A, as shown in Table 1. It attempted to find the frequency lists, contexts, and collocations of mental health-related words in the corpus.

Table 1 Corpus used

Name	Language	Texts	Tokens	Additional information
Corpus A	Malay/English	1	32,127	Types: 4,317 Lemmas: 4,460

In the study, one corpus was used with a total size of 32,127 running words (tokens) in one text file.

4.1 General Overview: Frequency Lists

Table 2 shows the frequencies (both absolute and relative) of the top ten words in the corpus.

Table 2 Top ten types in Corpus 1

Rank	Type	Absolute frequency (Relative frequency)
1	<i>aku</i>	1544 (480.593)
2	<i>yang</i>	739 (230.025)
3	<i>tak</i>	614 (191.117)
4	<i>nak</i>	574 (178.666)
5	<i>ni</i>	570 (177.421)
6	<i>dia</i>	551 (171.507)
7	<i>tu</i>	521 (162.169)
8	<i>dan</i>	447 (139.135)
9	<i>dah</i>	400 (124.506)
10	<i>sebab</i>	314 (97.737)

From the list above, it can be seen that the top ten words are all function words. Two pronouns: ‘aku’ means ‘I’ and ‘dia’ means ‘he’ or ‘she’, are listed in the corpus. ‘aku’ mostly refers to female ‘I’, as the writers for the posts are women. Some examples of the use of the word ‘aku’ are shown in Table 3.

Table 3 Example of concordance lines of the word ‘aku’ in different contexts

Example	Left	Node	Right
1	<i>pandemik. Pelajaran online memberi tekanan buat anak-anak</i>	<i>aku</i>	<i>So kenapa aku nak gadaikan kesihatan mental</i>
2	<i>Itu bukan pengukur masa depan mereka kan.</i>	<i>aku</i>	<i>nak jadi ibu yang sentiasa ada untuk</i>

Examples 1 and 2 shows ‘aku’ was used to highlight the women’s role as a mother for their kids.

The second ranked pronoun was ‘*dia*’. The pronoun ‘*dia*’ refers to several meanings, as shown in Table 4 which displays the concordance lines of the word ‘*dia*’.

Table 4 Example of concordance lines of the word ‘*dia*’ in different contexts

Example	Left	Node	Right
1	behavior <i>tu ya Allah. But... Allah bantu,</i>	<i>DIA</i>	<i>bagi bila DIA nak bagi. Kebanyakannya aku</i>
2	<i>yang melibatkan keluarga dan kawan-kawan dia. Sebab</i>	<i>dia</i>	<i>sejenis yang tak suka bini overshadow, so</i>
3	<i>adik je. Itupun bergaduh 24 jam. Habis-habis</i>	<i>dia</i>	<i>boleh bagi adik makan. Masak nasi dah</i>
4	is like one having brain cancer. Treatment	<i>dia</i>	<i>dah tentu berbeza kan? Severity dia pun</i>

It is worthwhile to mention that the word ‘*dia*’ in Malay does not limit itself to pronouns only. For example, it can be observed in Example 1 that the word ‘*dia*’ is used to address God. Example 2 shows the use of ‘*dia*’ to address the author’s husband, while Example 3 shows the use of ‘*dia*’ to address the author’s child. Example 4 shows how ‘*dia*’ is used to refer to a noun, as in ‘the treatment’.

4.2 Specific Searches: Contexts and Collocations

The researchers searched several words related to mental health and pandemic-related words in the corpus to seek answers for Research Question 2. The words were stress, *tekanan*, depression, depress, anxiety, mental, *PKP (Perintah Kawalan Pergerakan)*, and COVID. Table 5 displays the overall distribution of the search terms of mental health and pandemic related words in the specialised corpus.

Table 5 Distribution of the search term of mental health and pandemic related words in the corpus

	Terms	Tokens	Frequency	Relative frequency per 10k
Mental health related words	mental	32127	87	27.080
	stress	32127	67	20.855
	depression	32127	59	18.365
	<i>tekanan</i>	32127	45	14.007
	depress	32127	19	5.914
	<i>gila</i>	32127	12	3.740
	anxiety	32127	8	2.490
Pandemic related words	<i>PKP</i>	32127	14	4.358
	COVID	32127	4	1.245

Because the corpus included both Malay and English, the researchers decided to look for mental health-related words in both languages. The researchers were unable to search for the Malay word for depression,

Table 7 Example of concordance lines of the word ‘tekanan’ in different contexts

Example	Left	Node	Right
1	<i>nak mati dah. Lemas dengan tekanan demi</i>	<i>tekanan</i>	<i>Seolah takde jalan keluarnya. Aku cuma penat!</i>
2	<i>covid punya hal, semua yang lain memberikan</i>	<i>tekanan</i>	<i>mental yang cukup maksimum dalam hidup saya.</i>
3	<i>Badan rasa lemah, kebas-kebas, rasa nak pitam.</i>	<i>Tekanan</i>	<i>darah rendah agaknya. Makan minum tidur semua</i>
4	<i>hari bleeding teruk, badan lembik rasa. Dengan</i>	<i>tekanan</i>	<i>nak siap ke KL lagi. Rasanya nak</i>

In Example 1 and 2, the word ‘tekanan’ is used to indicate ‘stress’ as a noun. In Example 3, the word ‘tekanan’ refers to *tekanan darah* in Malay, or blood pressure, whereas in Example 4, the word ‘tekanan’ is used to show ‘urgency of a matter’. The collocation for the word ‘tekanan’ is shown in Figure 2.

**Figure 2** The collocation graph for ‘tekanan’ in the corpus

The word ‘aku’ is clearly associated with the word ‘tekanan’. This could imply that the women are emphasising their stress when writing about their feelings and experiences online.

The following terms, ‘depression’ and ‘depress’ were looked up. The search term ‘depression’ appears 59 times (18.365 times per 10k) in the corpus, while the search term ‘depress’ appears 19 times (5.914 times per 10k) in the corpus. Table 8 provides examples of the contexts for both terms.

Table 8 Example of concordance lines of the word ‘depression’ and ‘depress’ in different contexts

Example	Left	Node	Right
1	Adakah termasuk dalam situational depression, atau clinical	depression.	As for her, memang obvious sangat la
2	Stress yang managable. So betul la kan	depression	boleh pulih? Betul, memang betul. Cuma kena
3	Dan sesungguhnya betul la apa yang dikata.	depression	je pun dah boleh buat orang hilang
4	As for her, memang obvious sangat la	depression	tu terjadi disebabkan situasi.
5	kanser. Itulah perumpamaannya. Sekarang, ramai yang ada	Depression.	Diagnosed! Tapi ramai yang tak tau depression
6	Dalam keadaan dunia sedang bercakap tentang "Great	Depression"	pasca pandemic issue ni, pasca PKP ni,
7	waktu tu jugak. Just imagine ye, bila	depress	saya ada sui****1 thoughts, ada urges nak
8	Dalam friendlist aku ni cukup ramai yang	depress	sebab rumahtangga, sebab penceraian. Tapi lepas tu

Example 1, 2, 3, and 4 demonstrate how the word depression is used as a noun (clinical depression; ada depression). It is worth noting that there was also a reference to the phase of ‘Great Depression’ (Example 6) in the corpus. The author was comparing the pandemic period to the ‘Great Depression’ period. Figure 3 depicts the collocations of the word ‘depression’.

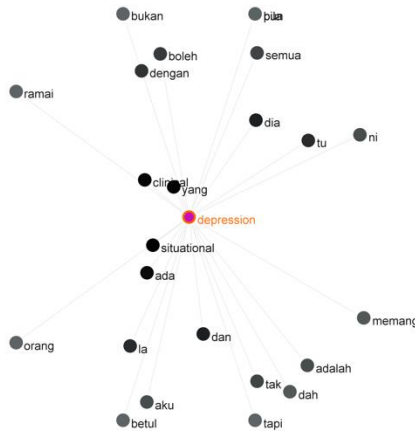


Figure 3 The collocation graph for ‘depression’ in the corpus

It can be observed that words like ‘clinical’ and ‘situational’ are associated with ‘depression’. This could be a reference to the symptoms of depression. The word ‘ada’ is also frequently associated with depression. As shown in Example 5 of Table 8, the word ‘ada’ is commonly used before the word ‘depression’ (...ada depression...). This shows a form of acknowledgement that many women are facing mental health issues.

The women used the word ‘depress’ in addition to ‘depression’ to describe their mental health. Examples 4, 7, and 8 display how the women used the words ‘depression’ and ‘depress’ to describe their and their friends’ depression experiences. Figure 4 depicts the collocation for the word ‘depress’.



Figure 4 The collocation graph for ‘depress’ in the corpus

There are four words associated with the word ‘depress’ which are ‘dia’ and ‘dah’ (left node) and ‘tapi’ and ‘saya’ (right node). Examples of occurrence on the left node are ‘...*dia depress*...’ or ‘*aku dah depress*...’. Examples of occurrence on the right node are ‘...*tapi aku depress*...’ or ‘...*depress saya dengar*...’.

Finally, since this study is about the mental health of Malaysian women, the researchers searched the corpus for the word ‘mental’ to determine its meaning and reference in the corpus. The search term ‘mental’ occurs 87 times (27.080 per 10k) in the corpus. When compared to other mental health-related words, it is the most frequent word in the corpus. In general, women use the word ‘mental’ to mean various things in various contexts. Table 9 contains some examples of the words related to the term ‘mental’.

Table 9 Example of concordance lines of the word ‘mental’ in the corpus

Example	Left	Node	Right
1	<i>sangat. Bagi orang yang faham tentang penyakit</i>	mental	<i>ni, dia akan follow the flow je.</i>
2	<i>Allah uji mereka sendiri dengan masalah kesihatan</i>	mental.	<i>Bukan penyakit mental pun, cuma kesihatan mental</i>
3	<i>semua luahan kita? Silap-silap nanti dia pun</i>	mental	<i>jugak. Aku nak meroyan tulis bukan-bukan pun</i>
4	<i>3 bulan hidup dengan orang yang mendera</i>	mental	<i>Hatta nak ke KL ni pun,</i>
5	<i>anak-anak ni, lahir dan batin, fizikal dan</i>	mental.	<i>Tapi satu masa dulu aku dah buat</i>

Example 1 shows how the word ‘mental’ is used as a noun to refer to *penyakit mental* or mental illness. In Example 2, the word ‘mental’ is also used as a noun to refer to *kesihatan mental* or mental health. Interestingly, some women used the word ‘mental’ to describe how someone can be ‘*gila*’ or crazy. They did not use the word ‘crazy’, but rather the word ‘mental’ instead. It is quite common in Malay to use the word ‘mental’ to indicate how crazy a person or thing can be. In example 4, the word ‘mental’ is combined with ‘*dera*’, which means ‘abuse’. Last but not least, the word ‘mental’ was used when the author listed a person’s well-being from the phrase ‘...*fizikal dan mental*...’ or ‘...physical and mental’ in English. Since the word ‘mental’ is at the top of the frequency list, it has many collocations, as illustrated in Figure 5.

relieve their emotional pain. Additionally, the word associations of the health-related words in the corpus offered insight into how these women perceive their mental well-being and their primary concerns during the pandemic. Notably, it is intriguing to observe that, despite distinct definitions in English, the application of ‘stress’ and ‘depression’ in Malay suggests a certain linguistic convergence. This observation stems from the absence of ‘*murung*’, the Malay word for ‘depression’, in the current corpus. Further exploration of how women comprehend and navigate the nuances between ‘stress’, ‘depress’, ‘*gila*’ and ‘mental’ in their language usage could yield valuable insights into their mental health experiences.

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