

A Transitivity Analysis of the Experience of Depression as Expressed on Thai Twitter

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Abstract

Twitter is an online platform where users can express their experiences and opinions. Depression is conveyed on Twitter through a writer's point of view. Transitivity analysis examines the verbal choices a speaker or writer makes to reflect their view of a given situation. This study focused on a transitivity analysis of the experience of depression as seen on Thai Twitter. Transitivity was analyzed in 200 tweets (Twitter messages) with the hashtags #ซึมเศร้า [suumsâw] (#depression) and #โรคซึมเศร้า [rôoksuum-sâw] (#depressed disorder). The analysis focused on the types of processes represented in the tweets, with the results demonstrating six such processes: mental, behavioral, material, existential, relational, and verbal. In the 200 tweets examined, 642 verbs were present. The most frequent type of process found was mental (38.94%), followed by behavioral (26.79%),

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material (12.62%), relational (7.63%), verbal (7.17%), and existential (6.85%). The results indicate that mental processes were found most frequently to represent negative feelings in various words and phrases such as *want to cry*, *upset*, and *painful*; for behavioral processes, *cry* and *unintentionally laughing on the outside*; for material processes, *destroyed* and *used to be bullied*; for existential processes, *to exist*; and for verbal processes, *beg* and *complain*. This transitivity analysis reflects the experience of depression as it is expressed on Twitter. The verbal choices in these tweets can function as indicators of depressive disorder.

Keywords: depression experience, discourse analysis, transitivity, Twitter, type of process

บทคัดย่อ

ทวิตเตอร์ถือเป็นสื่อออนไลน์หนึ่งที่ใช้สามารถถ่ายทอดประสบการณ์และความคิดเห็นได้อย่างเป็นอิสระ โรคซึมเศร้าถูกถ่ายทอดผ่านทวิตเตอร์โดยมุมมองของผู้เขียน การวิเคราะห์กระบวนการเป็นการวิเคราะห์การเลือกใช้คำกริยาที่สามารถสะท้อนมุมมองในแต่ละสถานการณ์ของผู้พูดและผู้เขียนได้ งานวิจัยนี้มีวัตถุประสงค์เพื่อวิเคราะห์กระบวนการ ในการถ่ายทอดประสบการณ์ซึมเศร้าที่ปรากฏในทวิตเตอร์ในประเทศไทย กลุ่มตัวอย่างข้อมูลคือข้อความทวิต 200 ข้อความที่คัดเลือกจาก #ซึมเศร้า และ #โรคซึมเศร้า ขอบเขตของการวิเคราะห์ในงานวิจัยคือชนิดของกระบวนการที่ปรากฏในข้อความทวิต ผลการวิจัยพบประเภทของกระบวนการทั้งหมด 6 ประเภท ได้แก่ กระบวนการแสดงความรู้สึก กระบวนการสื่อพฤติกรรมทั้งทางกายและจิตใจ กระบวนการแสดงการกระทำ กระบวนการแสดงการปรากฏขึ้นของสิ่งใดสิ่งหนึ่ง กระบวนการแสดงสภาพ และกระบวนการสื่อคำพูด ผลการวิเคราะห์พบว่า จากข้อความทวิตทั้งหมด 200 ข้อความ พบคำกริยาทั้งสิ้น 642 คำ กระบวนการแสดงความรู้สึกพบมากที่สุดถึงร้อยละ 38.94 อันดับรองลงมาคือกระบวนการสื่อพฤติกรรม

ทั้งทางกายและจิตใจร้อยละ 26.79 กระบวนการแสดงการกระทำร้อยละ 12.62 กระบวนการแสดงสภาพร้อยละ 7.63 กระบวนการสื่อคำพูดร้อยละ 7.17 กระบวนการแสดงการปรากฏขึ้นของสิ่งใดสิ่งหนึ่งร้อยละ 6.85 ตามลำดับ ผลการวิเคราะห์พบ คำกริยาในกระบวนการแสดงความรู้สึกเพื่อแสดงความรู้สึกด้านลบมากที่สุดทั้งในระดับคำและวลี เช่น อยากร้องไห้ [jàak rǔwŋ hâaj] เศร้า [sâw] และ เจ็บปวด [cèp pùat] กระบวนการสื่อพฤติกรรมทั้งทางกายและจิตใจ เช่น ร้องไห้ [rǔwŋhâaj] หัวเราะ แคใบ้หน้า [hǔarókhhēbajnáa] กระบวนการแสดงการกระทำ เช่น ทำลาย [tham laaj] โดนบูลลี่ [doon boon lii] กระบวนการสื่อคำพูด เช่น บ่น [bòn] อ้วน [wǔwŋ wɔwŋ] และกระบวนการแสดงการปรากฏขึ้นของสิ่งใดสิ่งหนึ่ง เช่น มี [mi] การวิเคราะห์ transitivity สื่อให้เห็นว่าประสบการณ์ที่เกี่ยวข้องกับโรคซึมเศร้าได้ถูกถ่ายทอด ในทวิตเตอร์ การเลือกใช้คำกริยาที่ปรากฏในข้อความทวิตสามารถบ่งชี้อาการ โรคซึมเศร้าได้

คำสำคัญ: ประสบการณ์เกี่ยวกับโรคซึมเศร้า ปริจเฉทวิเคราะห์ กระบวนการ ทวิตเตอร์ ชนิดของกระบวนการ

Introduction

Systemic functional linguistics (SFL) is a linguistic school of thought founded by Michael Halliday which analyzes language through the perspective that language reflects a user's ideas (Halliday et al., 2014). This perspective proposes that users usually choose language in accordance with their thoughts or points of view. SFL is suitable for analyzing similar events in order to discover how individual language users represent their view toward a particular event. Previous studies have shown that SFL can be used to analyze a variety of language registers. For example, transitivity analyses have been conducted of newspaper headlines (Ongonda, 2016), of a debate between Hillary Clinton and Donald Trump (Zhang, 2017), of Thomas

Pynchon's *The Crying of Lot 49* (Ezzina, 2015), of the narratives of medical patients, including patients with cancer (Karimi, et al., 2018), and of the work of American writer Sylvia Plath, who experienced depression (Démjen, 2014).

Prior studies have indicated that transitivity analysis can reflect a language user's perspective. Thus, the objective of the study is to analyze the types of processes in Twitter messages about depression. Halliday and Matthiessen (2004) asserted that transitivity analysis is a linguistic description in the degree of metafunction, which is how language users transmit their experiences through meaning at the sentence level. Likewise, Karimi et al. (2018) analyzed transitivity in the language used by patients with cancer in meetings with their doctors, after the patients became aware of the terminal nature of their illness. The results revealed that patients generally chose to discuss their routines; for instance, they discussed how they took care of themselves, what they did each day, etc. This demonstrated that the presence of material and mental processes was in equal proportion. With regard to mental process, emotive verbs relating to the patients' feelings during the treatment were rarely found. Additionally, Démjen (2014) investigated the language used by a poet with depressive disorder. A part of the analysis showed that the transmission of depressive experiences and the negative viewpoints of patients with depression can be identified by linguistic approaches such as analyses of transitivity, metaphor, and lexico-grammatical choices. Following the research conducted by Karimi et al. (2018), which undertook an analysis of transitivity in the language used by cancer patients, the researcher of the present study was interested in studying the language used in social media posts about feeling depressed.

Depression, also known as depressive disorder, is a widespread mental condition that affects one's physical health and is also the leading cause of suicide (Razak et al., 2020). The number of patients diagnosed with depression is steadily increasing worldwide. As reported by the World Health Organization (WHO, 2018), depression and its resulting effects can be a major cause of death. Depression is defined as a mental condition that deviates one's behavior; for example, it can make one feel sad, hopeless, depressed, or pessimistic. Siriumpankul (2018) has discussed that this condition also affects physical health, appearing in such symptoms as appetite loss or insomnia. This condition can occur in a person of any gender or any age, as is being witnessed in Thailand where cases of depression are increasing across demographics. In some cases, depression can be cured through treatment, but in other cases where treatment proves insufficient, depression persists and can potentially lead to suicide. She has claimed that people generally understand that depressive disorder is caused by stress from family, work, and study. On the other hand, depression is also related to genetics, hormones, and family nurturing. She has added that the people who have the highest risk of depression are those who tend to think negatively. The causes of depression can be divided into three factors: physical, mental, and social.

In recent years, online communication has become an integral part of daily life. People regularly communicate, express their feelings, and offer their opinions on different social networking platforms. Siriumpankul (2018) conducted a study about the relationship between depression and behavior on social networking platforms, the results of which found that overuse of social media can be a factor in causing depression. Additional studies examining the relationship between

social media messaging and depression have been conducted by Zappavigna and Martin (2017). Their research showed that social networking sites are platforms that people use to express their thoughts and attitudes about depression. The data were collected via Twitter's Application Programming Interface (API). The data were analyzed through a systemic functional linguistics approach, and an appraisal framework was used to analyze the feeling expressions into communing affiliations, which were then divided into three distinct features: affect, judgement, and appreciation. The results showed that words posted on Twitter primarily represent negative feelings. In addition, a study conducted by Coppersmith, Dredze, and Harman (2014) also identified mental health signals on Twitter. These researchers examined language used on social media in order to create a method to reveal signals of mental health status. This study presented a linguistic phenomenon on Twitter concerning mental illness that specifically focused on post-traumatic stress disorder, depression, bipolar disorder, and seasonal affective disorder. For the data analysis, the researchers chose Twitter messages which appeared within the category *#depression*. The results of this study clearly demonstrated that emotions and mental conditions can be expressed through an online social networking platform. In addition, Pan, Liu, and Kreps (2018) used content analysis to investigate emotional expressions of depression on Sina Weibo which is a Chinese microblogging website with features similar to Twitter. The results found that messages on Sina Weibo showed both the feelings of patients with depression and also information about depression from various professional organizations.

There are a limited number of studies in Thailand that examine depression through a linguistic perspective. In a case study, Angkapanichkit et al. (2019) conducted a survey to examine language, communication, and depression in order to develop a better quality of

depression communication in Thai teenagers, specifically with regards to university students and the language used in public media to discuss issues of mental health. The research series conducted by Angkapanichkit et al. collected data from the diaries of patients with depression. However, in Thailand, studies specifically about the viewpoint of a person with depression on social media platforms are rare. This paper, therefore, aimed to investigate the language that occurs within hashtags (the symbol #) with category #ซึมเศร้า [sūmsāw] (#depression) on Twitter in order to point out social perspectives toward depression on social media.

Various linguists have discussed the functions of hashtags from different perspectives. Zappavigna (2018) viewed hashtags as a function of social interaction: language users typically express their feelings toward and impressions on the particular topic, all of which happens within the category of that hashtag. Furthermore, Matley (2018) has claimed that hashtags (#) has a function in metapragmatic: it does not only represent emotions, but also identity and self-esteem. [This symbol, therefore, plays a vital role as a topic marker on online communication platforms. Thus, category #ซึมเศร้า [sūmsāw] (#depression) and #โรคซึมเศร้า [rôoksūmsāw] (#depressive disorder) are the hashtags that were selected to accumulate the data presented here. Bury (2001) has observed that people with depression post on Twitter more often than on other platforms because users do not have to reveal their real identity there; this makes them more likely to disclose everyday experience with depression. Consequently, the study focused on the expression of depression in Thai language tweets. The objective of this study was to analyze transitivity in tweets posted about the experience of depression. Twitter messages about depression represent thoughts or ideas that were consistent with feeling depressed. Twitter users who are suffering from depression choose certain linguistic features within their

tweet to share their thoughts and feelings with others; these choices can serve as signals of depression.

Objectives/Research Questions

This study aimed to analyze the types of processes occurring in messages posted on Twitter that concerned depression.

Research Methodology

In this study, 200 Twitter messages including the phrases #ซึมเศร้า [suumsâw] (#depression) and #โรคซึมเศร้า [rôoksuumsâw] (#depressive disorder) on Twitter were collected and analyzed. The data were collected using the symbol # (hashtag) because previous studies, such as Zappavigna and Martin's (2018), suggest that this symbol is a powerful way to connect information on online social networking platforms, especially Twitter and Instagram. The main role of this symbol is as a topic marker for a set of communications, which allows people who are interested in a similar topic to share their messages within a particular hashtag. Therefore, the hashtag symbol was used in the study to access information on depression. Twitter writers were referring to depression experiences or self-story in their messages by category #ซึมเศร้า [suumsâw] (#depression) and #โรคซึมเศร้า [rôoksuumsâw] (#depressive disorder).

The data was collected through random sampling from October 2019 to February 2020. The random sampling by searching with the phrases #ซึมเศร้า [suumsâw] (#depression) and #โรคซึมเศร้า [rôoksuumsâw] (#depressive disorder). The data was randomly selected by picking the first-two messages per day on

20 days of each month. It was of 40 messages per month starting from October 2019, and the total sampling data consisted of 200 messages. This study analyzed transitivity in the tweets about depression conditions. Halliday et al. (2014) have pointed out that humans use language to reflect their thoughts and that different types of processes can demonstrate the experiences of language users through the meaning of sentences. The 200 messages that were collected contained 642 verbal clauses. The analysis of transitivity particularly emphasized the types of processes being used. The reason that verbal choice was the main focus of this study and that the participant roles are excluded from the data analysis is because of the variety of writing styles exhibited in messages on Twitter. Often, the participant's role is excluded entirely in messages. Likewise, it was not possible to analyze the frequency of a participant's role in the tweets, either. Transitivity analysis can reflect representations of reality and proposes that speakers use different clauses to represent their experiences (Fowler, 1986). Beyond the analysis of types of processes, this study also determined the frequencies of each type in order to interpret language forms and understand how messages with depression experience are represented on social media.

This paper is based on the concept of transitivity established by Michael Halliday, who established systemic functional grammar. Transitivity is an analysis of the clause system that affects not only the verb that serves as a particular process, but also the participants and circumstances (Halliday & Matthiessen, 2004). This analysis has been used to explain how individuals reflect their experience and worldview through

verbal actions in text. Transitivity refers to metafunction through experience in terms of process, participants, and circumstances.

As mentioned by Halliday and Matthiessen (2004), transitivity analysis examines sentences in which language users illustrate their experiences, which are divided into three elements: 1) the groups of nouns that serve as the subject or object of the verb, 2) type of process (material, mental, relational, behavioral, verbal, existential), and 3) circumstance. Halliday's explanation of the types of processes and their relationship to the role of participants is summarized in Table 1 (Halliday et al., 2014).

Table 1

Types of processes and relationship to the role of participants

Process type	Definition	Participant
Material	Process of doing Process of happening	Actor, Goal
Behavioral	Process of physiological and psychological behavior	Behaver
Mental	Process of sensing	Senser, Phenomenon
Verbal	Process of saying	Sayer, Target
Relational	Process of being and having	Attributing Carrier, Attribute; Identifying: Identified, Identifier
Existential	Process of existing	Existent

Findings

The analysis focused specifically on the types of processes that occurred in the messages. The result of the process-type analysis in

messages related to depression on Twitter is illustrated in frequency and percentage as described in Table 2.

Table 2

Types of process in messages related to depression on Twitter

Type of process	Frequency	Percentage
Mental process	250	38.94
Behavioral process	172	26.79
Material process	81	12.62
Relational process	49	7.63
Verbal process	46	7.17
Existential process	44	6.85
Total	642	100

The data of the frequency and percentage showed 642 verbal clauses that were taken from the 200 messages collected. The most frequent type of process found was mental process (250 words, 38.94%), followed by behavioral process (172 words, 26.79%), material process (81 words, 12.62%), relational process (49 words, 7.63%), verbal process (46 words, 7.17%), and existential process (44 words, 6.85%). Examples of the writers' expressions of their depressive experience on Twitter are organized by type of process, and are as follows:

1. Mental process

The verbs that represented the writers' thoughts revealed that they were likely to openly express their feelings on social media. It was found that mental process was the most frequent process, at 38.94%. Delving into more details, there was a pattern of verb choice used by the writers, which was *อยาก* [j^àak] (want) or *ไม่อยาก* [m^âj j^àak] (do not

want) followed by a verb. It was found that the writers used the verb to express their emotions, as well, as is seen in the pattern *lâ' [mâj]* (do not/no) followed by a word describing a feeling or emotion.

According to Levin's (1993) classification of verbal clauses, there are three subtypes of mental process: cognitive, such as *knowing*, *thinking*, or *understanding*; desiderative, such as *decision*, *desire*, or *preference*; emotive, such as *happiness*, *fear*, or *anger*; perceptive, such as *visual* or *aural*. The study has classified the mental verbal clauses according to Levin's classification system.

The result shows three sub-types of mental process in tweets related to depression: cognitive, desiderative, and emotive. The data are represented by frequency and percentage as described in Table 3.

Table 3

Sub-types of mental process in tweets related to depression

Sub-types of mental process	frequency	percentage
desiderative	142	56.8
emotive	87	34.8
cognitive	21	8.4
total	250	100

From the data in the table, the most frequent sub-type of mental process found was desiderative words (142 words, 56.8%), followed by emotive words (87 words, 34.8%), and cognitive words (21 words, 8.4%). The examples of the sub-types of mental process are as follows:

cognitive	ไม่เข้าใจ [māj khāwcaj] don't understand	
desiderative	อยากร้องไห้ [jàak rǒwng hāaj] want to cry	ไม่อยากสู้ [māj jàak sūu] don't want to fight
	อยากหลับไปเลย [jàak làp paj ləəj] want to sleep forever	ไม่อยากอ่อนแอ [māj jàak ʔwǒnʔɛɛ] don't want to be weak
	อยากจะร้องไห้ [jàak cà rǒwng hāaj] will want to cry	ไม่อยากตื่น [māj jàak tuèun] don't want to wake up
	อยากอยู่คนเดียว [jàak jùu khon diaw] want to be alone	ไม่อยากอยู่ [māj jàak jùu] don't want to live
	อยากตาย [jàaktaaj] want to die	ไม่อยากคิดมาก [māj jàak khítmāak] don't want to overthink
		ไม่อยากรับรู้ [māj jàak ráprúu] don't want to know

emotive	โมโห [moohǎo]	เศร้า [sâw]
	angry	upset
	แย่	ทรมาน
	[jây]	[thoo rá maan]
	terrible	tortured
	ดิ่ง [dìŋ]	อิจฉา [ʔìt cháa]
	frustrated	jealous
	เกลียด [kliat]	อึดอัด [ʔuət ʔət]
	hateful	uncomfortable
		เจ็บปวด
		[cèp puat]
		painful

It was observed that verbs often related to a desire to do or not to do something, which focused on the negative perspectives and emotions of the writers. This can be seen in the following sentences:

- (1) อิจฉาคนที่เขามีความสุขจังเลย
[ʔìt cháa khon thii khǎaw mii khwaam sùk caŋ ləəj]
Being jealous of people who have happiness
- (2) อยากหายไปจากโลกนี้ซักที
[jàak hǎaj paj càak lôok nǐ sák thii]
Want to disappear from the world
- (3) เราดิ่งว่ะ [raw dìŋ wà]
I am upset.

- (4) เราเหนื่อยเหลือเกินที่ต้องเป็นแบบนี้
[raw nuəj luə kəən thîi tɔŋ pen bɛɛp nîi]
I am so tired of being like this.
- (5) เราไม่อยากรับรู้เรื่องราวแย่ๆนี้อีกต่อไป
[raw māj jāak rāp rūu ruāŋ raaw jɛɛ jɛɛ nîi ʔiik tòw paj]
I don't want to know about all of these terrible things.

These sentences illustrate that the writers share their feelings of depression by using the negative words which reflect their preoccupation and negative thought.

2. Behavioral process

The verbs that are related to psychological processes affect the actions. The verbs found in the messages posted by writers illustrated that their psychological and physiological behavior reflects their depression experience. This can be shown through the behavioral verbal process.

ร้องไห้ [rɔŋhāaj]
cry

ไม่หลับ [mājlap]
cannot sleep

มึนหัว [munhǔa]
getting dizzy

ไม่นอน [mājnon]
don't sleep

ปวดหัว [pùathǔa]
headache

ไม่มีแรง [mājmiireɛŋ]
being powerless

หลับไม่สนิท [lápmǎjsànit]
having bad sleep

หัวเราะแค้ใบหน้า
[hǔarókhěebajnáa]
unintentionally laughing on
the outside

สมเพช [sǒmphêet]
self-pity

ป่วย [pùaj]
become sick

Apart from the verbs in the behavioral process, there were also verb complements, such as *laughing*. However, the verbal clause *laughing* occurred within the prepositional phrase in terms of the circumstantial (location) *on the outside* and circumstantial (quality) adverb *unintentionally*, which reflected that the writer of the message did not want others to be aware of their expression. For the circumstantial แค้ใบหน้า [khê̌e baj náa] (on the outside/on the face), it can be interpreted that the writer did not truly feel what they physically expressed on the outside.

3. Relational process

Relational process is related to the verb *to be* plus a linking verb. The two sub-types of relational process are attributive and identifying. The participant roles of the attributive process are carrier and attribute, whereas the participant roles in the identifying process are token and value. According to Yiemkuntitavorn (2005), the Thai verbal clauses “เป็น [pen],” and “คือ” [khuuu] constitute an attributive process. The

results found the attributive process in the messages that included “เป็น” [pen] (become) and “คือ” [khuu] (been). Typically, relational verbs are used by writers to represent themselves at a particular point in time.

- (6) ผมกลายเป็นคนยิ้มไม่เป็น
[phǒm klaaj pen khon jím māj pen]
I become a person who does not know how to smile.
- (7) เราคงเป็นลูกที่แย่มากเลยสินะ
[raw khon pen lúuk thîi jêe máak ləəj sì ná?]
I must have been a bad child.
- (8) ข้อดีของโรคซึมเศร้า คือ ทำให้เราได้ว่ามิตรแท้มีไม่กี่คน
[khǒw dii khǒw rók suum sǎw khuu tham hāj rúu wāa mīt thée mii māj kii khon]
The advantage of depression is that I realized that there are only a few true friends.
- (9) สิ่งที่น่าผิดหวังสำหรับฉันในทุกๆเช้าคือการลืมตาตื่นขึ้นมาบนโลกใบนี้อีกครั้ง
[sìng thîi nāa phít wǎng sǎm ràp chǎn naj thúk thúk cháaw khuu kaan luum taa tuuun khuin maa bon lóok baj níi ?iik khrǎŋ]
What disappoints me is the way that I have to wake up every morning.

Additionally, there were interrogative sentences found in the relational process: for example, เราเป็นอะไรนะ [raw pen ?à

raj náa?] (what's wrong with me?), *ทำไมเราเป็นแบบนี้* [**tham maj raw pen bèep nîi**] (what's wrong with me?), and *นายคืออะไรกันแน่* [**naaj khuu ?à raj kan nêe**] (what's wrong with me?). It was observed that the noun that is the subject of example 6 also has the writer as its attribute. On the other hand, examples 7 and 9 have patients in an identifying role. For examples 8 and 9, the subjects mention the emotions of patients with depression through the noun phrases *ข้อดีของโรคซึมเศร้า* [**khôw dii khwóng rôok suum sâw**] (the advantage of depression) and *สิ่งที่น่าผิดหวังสำหรับฉันในทุกๆเช้า* [**sìng thîi nâa phî twǎng sǎm rǎp chǎn naj thúk thúk cháaw**] (what disappoints me). The participants in examples 8 and 9 are in an identifying role.

The verbs in the relational process depicted the characteristics or identities of the patients and how they view themselves: for instance, *ลูกที่แย่มาก* [**lûuk thîi jêe mâak**] (bad child) and *คนยิ้มไม่เป็น* [**khon jím mâj pen**] (a person who cannot smile). Furthermore, interrogative sentences used in the process showed the patients' uncertainty in their conditions: for example, *เราเป็นอะไรนะ* [**raw pen ?à raj náa?**] (what's wrong with me?) and *ทำไมเราเป็นแบบนี้* [**tham maj raw pen bèep nîi**] (what's wrong with me?). These kinds of questions are most likely rhetorical. It can be interpreted that some patients were confused with their own state, though they tried obsessively to understand it.

4. Verbal process

The verbal process refers to the verbs that state or express speech (indirect speech). The verbs found in the data were *บ่น* [**bòn**] (to complain), *อ้อนวอน* [**?wôn wôn**] (to beg), *บอก*

[bòók](to tell), ชี้น้ำด่า [chii nâa dàa] (to insult), ทัก [thák](to greet), ตะโกน [tà koon](to shout), ถาม [thăam](to ask), and พูด [phúut](to speak).

- (10) ไม่เคยอ้อนวอนให้ใครมายอมรับ
[mâj khəøj ?wôn wəon hâj khraj maa jwom ráp]
Never beg someone to accept.
- (11) บ่นกับตัวเองทุกครั้ง
[bòn kàp tua ?eeng thúk khrán]
Always complain to myself.
- (12) ถามว่าตอนนั้นรู้สึกยังไง
[thăam wâa təon nán rúu suèk jaŋ ɲaj]
Ask how did I feel at that time.
- (13) ข้างนอกใครถามก็บอกว่าไม่เป็นไร
[khâaŋ nòók khraj thăam kʰì bòók wâa mâj pen raj]
When somebody asked, I said I was fine.

The expressions in this process showed the roles of writers as sayers: for example, ไม่เคยอ้อนวอนให้ใครมายอมรับ [mâjkhəøj?wônwəonhâjk hrajmaajwomráp] (never beg someone to accept). Some sentences have a writer's role as both a sayer and a receiver: for example, บ่นกับตัวเองทุกครั้ง [bònkàptua?eengthúkkhrán] (always complain to myself). The interpretation of these sentences suggests that the patients obsess over the thoughts that they struggle with most, and that they express these thoughts on Twitter.

It was found that verbs in the verbal process included not only those that stated indirect speech like *to ask* or *to tell*, but also verbs that expressed speech emotively. For example, *to beg* means asking somebody to do something. Example 10, ไม่เคยอ้อนวอนให้ใครมายอมรับ [mâj khəøj ʔwɔn wɔn hâj khraj maa jɔm ráp] (never beg someone to accept), reveals that the people who surround the writers do not understand their condition. Example 11, ป่นกับตัวเองทุกครั้ง [bòn kàp tua ʔeɛj thúk khraŋ] (always complain to myself), represents self-repetition.

5. Material process

The material process examines the verbs that represent actions. According to the data, the experience-expressions on twitter are related to the actions. The writers' actions mostly implied that they are behaved or that they perceive the consequences of their actions. This can be seen in two different sentence constructions—passive and active voice—as shown in Table 4.

Table 4

Examples of active and passive construction in material processes

Active construction	Passive construction
ทำลายชีวิตกู [tham laaj chii wít kuu] Destroy my life	เด็กน้อยๆคนหนึ่ง ที่ถูกทำร้าย โดย ครอบครัวของตัวเอง [dèk nówj nówj khon nuèŋ thîi thùuk tham ráaj dooj khrɔ̀p khraw khɔ̀w kháw ʔeɛj] A little child that is harmed by their family
ทำร้ายเราทางคำพูด สายตา ท่าทาง [tham ráaj raw thaɛj kham phúut sǎaj taa thá thaɛj]	

Active construction	Passive construction
<p>Harm me by speech, sight, and gesture</p> <p>มันทับเราไว้จนเราหายใจไม่ออก [man tháp raw wáj con raw háaj caj māj ?wək] It presses me, and I can't breathe.</p> <p>คุณทิ้งผมไว้อีกแล้วนะ [khun thín wáj ?iik léew náa?] You abandoned me again.</p> <p>แหม่งแกล้งเราทุกอย่าง [mêŋ klên raw thúk jàaŋ] It always teases me.</p> <p>ทำลายชีวิตทุกอย่าง [tham laaj chii wít kuu thúk jàaŋ] Destroy everything in my life</p>	<p>ส่วนตัวเคยโดนบูลลี่นะ [sùan tua khəj doon boon lî ná?] Personally, I used to be bullied.</p>

The verbs in the material process which were found in the messages were *fight*, *press*, *bully*, etc. Within the active sentence constructions, patients were typically found as the goal. Furthermore, in the passive sentence constructions, the verbs observed were *being harmed*, *being bullied*, etc. In addition, it does not matter how the writers express their experiences. They

usually reflected their views as the goal. This point conveys that the writers would like to express their point of view through social media and that these actions were related to the condition of their depression.

6. Existential process

This process focuses on verbs that refer to the existence of something (specifically, *to exist*), which is seen in the following example:

- (14) ทุกปัญหามีทางแก้..ไม่มีจริง
[thúk pan hǎa mii thaang kĕe.. mǎj mii cĭŋ]
A solution exists for every problem...That isn't true.

From example (14) the main verb is *to exist*, but it is negated afterward. It can be implied that the writer holds an unfavorable view of his or herself and thinks that these problems will never be solved. Thus, the role of the participant is existent.

Conclusion and Discussion

This study represents a linguistic perspective of depressive experience on the social networking platform Twitter. Several studies conducted outside Thailand similarly explored the language use of patients with depression through a systemic functional linguistic perspective. Démjen (2014) investigated the language used by a poet through transitivity analysis. It was observed that the poet mostly used a material process to express negative experiences, as was similar in patients with cancer (Karimi et al. 2018). Most of the data

collected in these studies were from conversations in which doctors asked the patients to recite their routines. Karimi et al. (2018) claimed that patients with cancer attempted to talk about their daily routines rather than their emotions. While the three previous investigations correspondingly found that patients normally used material processes to represent their thoughts, the present study revealed that mental processes were the most frequent type that occurred in Twitter messages (38.00%). Moreover, material processes were ranked third (12.62%). It is possible that social media can be a space where patients with depression can vent their feelings. Zappavigna and Martin (2017) support the fact that messages on online networking spaces can be considered a public conversation where writers can freely express their views or experiences. Correspondingly, the results of each process analysis showed negativity, pessimism, and isolation.

The process found in the highest frequency in this study was mental process (38.94%). Verbs in this process can be divided into two subtypes. The first is mental as desiderative, which refers to verbs that occur with *อยาก*[**jàak**](want), as in *อยากตาย* [**jàak taaj**](want to die), and also those verbs that occur with *ไม่* *อยาก*[**mâj jáak**](don't want), as in *ไม่อยากจะรู้*[**mâj jáak ráp rúu**](don't want to know). The other subtype is mental as emotive, which refers to verbs that negatively express emotions, such as *exhaust*, *give up*, and *depress*. The second most common process was behavioral (26.79%), which includes verbs that are affected by mental conditions. For instance, *ร้องไห้* [**róng hâaj**] (crying) is

influenced by feeling sorry about something or หัวเราะแค่ใบหน้า [hǔarók̚hêɛbajnáa] (unintentionally laughing on the outside), laughing is influenced by happiness. However, there was the circumstantial แ่ใบหน้า [khêɛ baj náa] (outside/on face) that followed the word *laughing*, which implies that the patient was not truly happy. The analysis of this message also associates with a mental process, since mental damage affects physical conditions, such as crying and experiencing headaches. Likewise, Eichstaedt et al. (2018) investigated language on Facebook in order to predict depression. They stated that depression consists of sad emotions and a feeling of isolation and loneliness. This study saw that a basic method of depression-prediction was identifying negative emotions.

The third most common process was material (12.62%), which consists of verbs that treated participants as objects, whether the sentence was an active or passive construction. Examples included ทำลาย [tham laaj] (destroy), ทำร้าย [tham ráaj] (harm), and ทิ้ง [thíng] (abandon). These verbs represent the patients' view of how they are treated by society. This result did not reflect the results of a previous study, which illustrated that patients usually identify themselves as actors (Démjen 2014; Fosgerau & Davidsen 2019).

The fourth process was relational process (7.63%), which included verbs that represent the identities of the patients: for example, *I am a terrible child* or *I don't smile like I did*. The latter of these also shows a verbal process, which was the fifth process

(7.17%). **ບຸ່ນ** [**bòn**](to complain), **ຖາມ** [**thăam**](to ask), and **ພູດ** [**phûut**](to speak) are examples of verbs in verbal process which were analyzed from the messages. An interesting point about this process was the role that many writers played by mentioning themselves in the messages; thus, writers can be both sayers and receivers in a sentence. These “saying verbs” reflect the depressive characteristics of self-blame and obsessive-compulsivity. The sixth process was existential (6.85%). Messages in this process included **ໄມ້ມີ** [**mâjmii**](to not have); for example, **ທຸກປຶ້ມທາງມີທາງແກ້ໄມ້ມີຈິງ** [**thúk pan hăa mii thaang kêe mâj mii cing**](A solution exists for every problem... That isn't true). In these statements, writers tried to convey that they were not happy or that they couldn't solve their problems. The statements imply the social struggles that the writers confront in daily life.

The results revealed that experiences with depression presented on Twitter by writers mainly related to their feelings toward themselves and their peers. The messages about depression conveyed the negative feeling, disinterest in their activities, the reasons for depression. It can be seen that tweets containing **# ສົມເສດຮ້າງ** [**sumsâw**] (#depression) and **#ໂຣດສົມເສດຮ້າງ** [**rôoksumsâw**] (#depressivedisorder) can indicate depressive characteristics when one examines the verbal processes of the tweets; for example, the tweets can reveal when a writer feels negative or sad, struggles socially, or pretends to be happy. The linguistic mechanisms that identify depression on social media are the verbs that appeared in the mental, material, and verbal processes. Behavioral, existential, and relational processes reflected characteristics, identity, and initial conditions of

depression, and they also represented the writers' perspectives towards the people around them and society at large. The result indicates that transitivity analysis can function as a valuable tool to explore the process of a character's depression experiences.

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