Research Article

A Content Analysis of Social Anxiety-Related Tweets

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Abstract | Twitter is considered the most famous and well-known medium for communicating breaking news and digesting bite-sized content and communicating directly with the users in real-time. Currently, it has been used to communicate mental illnesses as well. To examine symptoms and major themes of social anxiety discussed on Twitter A qualitative research design was used in the current research. NCapture was used to randomly select 500 tweets of social anxiety published from 1st January 2022 to 30th June 2022. Nvivo was used to do a content analysis of tweets. The content analysis reflected three major symptoms of social anxiety including behavioural, cognitive, and physiological. The tweets have discussed different domains that were coded into four major themes (i) Complications linked with social anxiety, (ii) Desire to overcome social anxiety, (iii) Disclosure of social anxiety in tweets, and (iv) Supportive tweets about social anxiety. The study provided valuable information about the content of social media tweets reflecting the need to increase more awareness in the general public about the ways to manage social anxiety.

1. Introduction

The use of social media platforms has been increased over the past few decades. Approximately 58.4% population uses social media regularly and the average daily use is 2 hours 27 minutes (Chaffey, 2022). Twitter is the fourth largest social media networking site followed by Instagram, You Tube, and Facebook. This media usage is high among tech-savvy users and is particularly related to marketing, business, and politics. Around 63% of Twitter users are between the age of 35 and 65 in males contribute two-thirds of the users (Robinson, 2021). Twitter is considered the most famous and well-known medium for communicating breaking news and digesting bite-sized content and communicating directly with the users in real-time.

The Twitter audience was 290.5 million in 2019 who were the monthly active users. The ratio of Twitter users increased to 329 million users in 2022 and it is expected that the Twitter users would become 335 million in 2023 and 340.2 million users in 2024 (Dixon, 2022). The popularity of Twitter has been growing due to its ease of use and its posts are public

compared to other platforms like Facebook profiles that have privacy settings. The research on Insider intelligence conducted in 2022 reflected that around 60% of Twitter users are of ages 18 to 44. The older users are quite limited on Twitter so their influence is quite limited and young twitter users can feel free to openly communicate on this platform even on the sensitive topics of mental illnesses.

Fear and anxiety result in avoidance that disrupts a person's life in the long run. The severe stress influence daily routines, relationships, school, and work activities. Social anxiety is a chronic psychological health condition that results in emotional symptoms (such as fear of negative evaluation, humiliation, embarrassment, fear of interaction, etc.), physical symptoms (such as fast heartbeat, trembling, muscle tension, etc.), and avoidance of social situations such as interaction with unfamiliar people, going to work, initiating conversations, making eye contact, etc.) (Mizzi *et al.*, 2022). Similar to other mental health problems, social anxiety arises from a complicated interaction of environmental and biological factors. The possible causes of social anxiety involve inherited traits, brain structure, and environment (Agordzo *et al.*, 2022).

In some cases, social anxiety runs in families and it became difficult to know how much from genetics and learned behaviour. Few people have an overactive amygdala that increases fear response, resulting in increased anxiety within different social situations. Social anxiety can be a learnt behaviour as some people develop the symptoms of social anxiety after embarrassing and unpleasant social situations (Schilstra *et al.*, 2022). Besides, several risk factors associated with social anxiety involve family history, negative experiences, temperament, new work or social demands, and conditions that can draw attention. It is necessary to treat social anxiety; otherwise, it interferes in the development of low self-esteem, negative self-talk, difficulty becoming assertive, poor social skills, low achievement, isolation, suicidal ideations and attempts (Single *et al.*, 2022).

Numerous studies have studied references to self-harm, depression, and suicide on social media to better understand this information but the research on social anxiety-related tweets is quite limited. The existing studies have explored posts about stress-related posts on Facebook (Zhu *et al.*, 2021) and depression-related Twitter posts (Cavazos-Rehg *et al.*, 2016). The present study has been planned on social anxiety due to its associated complications. A thorough analysis of social anxiety-related tweets will help the researcher to understand people's views about the mental illness of social anxiety.

1.1 Research question
1. How well do some tweets correspond with symptoms of social anxiety?
2. What are the most common themes of social anxiety-related chatter on Twitter?

1.2 Research objectives
- To get an insight about tweets that correspond with symptoms of social anxiety
- To explore common themes of social anxiety-related chatter on Twitter

2. Materials and Methods

A qualitative research design has been used in the current study. The first-hand information has been collected in the current study. The content about social anxiety have been collected through Twitter. The universe of tweets from 1st January 2022 to 30th June 2022 was approximately 200 billion and about 25,000 tweets were on social anxiety, but the present study has selected a random sample of 500 tweets based on keywords of interest. N capture was used to download 500 tweets from 1st January 2022 to 30th June 2022. N capture was preferred because it randomly selects tweets within the selected period. The tweets were restricted to the English language and the keyword was social anxiety. Nvivo was used for the content analysis of the tweeter data.

3. Results and Discussion

The result showed different symptoms and major themes discussed in the social anxiety related charter on Twitter discussed below:

The current study was a qualitative study on the social anxiety experiences evaluated through different tweets. Over the period, multifaceted tweets were found on Twitter showing a considerable presence of social networking about social anxiety on Twitter. The analysis of different tweets reflected a total of 43 references about the symptoms of social anxiety that are further categorized into different symptoms.

Table 1: Tweets about symptoms of social anxiety (Tweets: 500).

Themes	Categories	Codes
Symptoms of social anxiety	Behavioural symptoms	Cannot eat in front of others
		Cannot make phonecalls
		Difficulty interacting with strangers
		Difficulty making friends
		I cannot present in front of the class
		I face problems going outside and interacting with others
		I work alone all week
		Loneliness
		Problems interacting with others on social media
		Struggles to communicate with others
	Cognitive symptoms	Afraid to say wrong things
		Fear of negative evaluations
		I always think that what people will think about me
		Lack of motivation to go to school
		Negative Emotions
		Suspiciousness regarding the intentions of strangers
	Physiological symptoms	Blinks my eyes overy
		Feeling awkward and frozen
		Low energy to speak in front of others
		nervousness
		Tries to keep a neutral facial expression

Table 2: Themes of Social anxiety-related charter of Twitter (N= 500).

Themes	Categories	Codes
Complications linked with social anxiety	Self-problems	Harsh impact on self
	Problems at school, peer, and workplace	Problems with peer and relationship
		Problems at school
		Problems at workplace
Desire to overcome social anxiety	Scared, but desired to get help	Scared to get help as no one can help me
		Want to get rid of social anxiety
	The realization that no one understands	No one would understand my problem
Disclosure of social anxiety in tweets	Disclosure	Telling I have social anxiety
		Exploring personal experiences of social anxiety
Supportive tweets about social anxiety	Helpful tweets	Don't focus on others saying
		Helping tweets
	Support	Showing support

Figure 1: Word cloud.

The present study reflected three major categories of the symptoms of social anxiety that are also found in the anxiety literature (Agordzo *et al.*, 2022). The symptoms fall into the major three broad categories of physiological, cognitive, and behavioural symptoms of social anxiety. It reflects that people globally experience every type of symptom beyond the restriction of merely focusing on one specific type of symptom.

The behavioural symptoms of tweets were difficulty eating in front of others, inability to make phone calls, interaction difficulty etc. From the total of 43 references, 31 references have been found on behavioural symptoms such as, social anxiety is that it prevents me from eating at school, so I go about 10 hours without eating anything. Besides, the cognitive symptoms were also found as people tweeted about fear of negative evaluation, inadequate motivation, and suspiciousness. From the total of 43 references, 7 references were specifically related to the cognitive symptoms such as, fear of being retaliated against, cancelled, or ostracized. Physiological symptoms expressed in the tweets were blinking eyes, awkward feeling, and low energy to speak in front of the public. This type of symptom has been noted in the tweets that reflect that people experience different types of symptoms of social anxiety. From the total of 43 references, 5 references have been found on physiological symptoms such as, awkward and I froze several times. Word frequency has been calculated through Nvivo, which reflects that from the total of 500 tweets, the word social is repeated 483 times and anxiety is repeated 477 time.

Furthermore, the study came up with the four major themes from the social anxiety-related charter of

twitter. The first theme was, Complications linked with social anxiety that reflect many problems people experience when they are diagnosed with social anxiety or at least experience some symptoms. This theme was developed by involving different codes such as the harsh impact on self, problems at school, workplace, peers, relationships etc. The codes reflected different sorts of complications associated with social anxiety; therefore, these codes are named in the umbrella terms of complications. A total of 49 references have been found in this particular theme such as, tomorrow I have a very serious presentation of my year-end project and it's too much for my social anxiety I'm going to throw up.

The second theme was, desire to overcome social anxiety' reflects wishes of the people with social anxiety to overcome their social anxiety because they realize that their quality of life has been affected. Tweets reflected that people have the readiness to deal with their complications which is a positive factor to help them out. This theme has been developed based on various codes that represent this theme such as being scared to get help as no one will help me want to get rid of social anxiety, people will not understand my problems etc. A total of 15 references have been found in this particular theme such as, I really wish I could go a whole day without letting social anxiety have its way.

The third theme was, disclosure of social anxiety in tweets which shows that people openly discussed their symptoms in the tweets because Twitter is considered the most popular and helpful social networking site. This theme includes various codes such as telling I have social anxiety, exploring personal experiences of social anxiety etc. A total of 57 references have been found in this particular theme such as, I am feeling a significant amount of social anxiety since arriving at Anthrocon.

Last, but not least, the theme was supportive tweets about social anxiety' that were from organisations, clinical psychologists, therapists, and counsellors. The supportive tweets reflect all tweets in which people with social anxiety are motivated, some strategies have been shared to cope with their problems, or encourage them to get therapeutic services to deal with other sayings. The codes included in this theme involve don't focus on others saying, helping tweets, showing support etc. A total of 28 references have

been found in this particular theme such as, prompts and coping tips may improve mental health for people in minority groups. The study gave crucial information that are highly informative for the reader, researchers, and psychologists.

Conclusions and Recommendations

In short, the study was conducted on the social media tweets to get an insight about the description of social anxiety on twitter. The study provided valuable information about the content of social media tweets reflecting the need to increase more awareness in the general public about the ways to manage social anxiety.

The study was limited to the data of the past six months only but future studies can research the vast data of the past two to three years to come up with detailed information on this mental illness as more tweets examined over the extended period will produce more thorough findings. The current study has provided a roadmap to future research on tweets on different mental illnesses. Besides, future studies can research demographics and sources of data of tweets as well to further strengthen their findings.

Novelty Statement

This the first ever study conducted on the social media related tweets especially tweets of social anxiety. The current study gave an insight about disclosure of social anxiety through tweets.

Author's Contribution

All authors equally contributed to this research.

Conflict of interest
The authors have declared no conflict of interest.

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