

# ALETHEIA

Alpha Chi's Journal of Undergraduate Scholarship

Volume 8 | 2023

## TikTok and the Reliability to Self-Diagnose Mental Illnesses

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### *Aletheia* Vol. 8, 2023

**Title:** TikTok and the Reliability to Self-Diagnose Mental Illnesses

**DOI:** 10.21081/ax0382

**ISSN:** 2381-800X

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## TikTok and the Reliability to Self-Diagnose Mental Illnesses

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### Abstract

The app known as TikTok, has gained popularity over the past few years. However, mental illness has also dramatically risen in recent years. The purpose of this study was to examine the reliability of the information on TikTok and find its effects on the self-diagnosis of mental illnesses. This study has two hypotheses, that users will find the content they consume as reliable, and that perceived reliability correlates with self-diagnosis. A questionnaire was given to college students to examine potential behaviors and patterns associated with self-diagnosis and information perception. Results were analyzed using correlation and descriptive measures including mean, median, and standard deviations. The results found many positive correlations that confirmed both hypotheses. Not only are users finding information reliable, but when users trusted said videos, they also indicated they would use the app to self-diagnose. Indicating that there are patterns associated with perceived reliability that have a positive correlation to self-diagnose themselves with mental illnesses they self-identify with.

Keywords: *TikTok, reliability, self-diagnosis, mental illness, social media*

## Literature Review and Introduction

With over a billion active monthly users and downloads reaching 2.6 billion, TikTok has gained significant popularity since it first appeared in 2016 (Doyle, 2022). However, with so much attention and content there are bound to be some disadvantages with TikTok. In particular, the spread of misinformation through the platform is a problem. Many people can use TikTok to receive information about a variety of health concepts and it can be dangerous if the wrong concepts are spread. This is particularly true for information about mental illnesses.

Users can self-diagnose and create self-fulfilling prophecies. In addition, they can misdiagnose themselves with disorders that can be dangerous to themselves or others. Another key factor of self-diagnosis is the masking of symptoms. Users may misdiagnose themselves with an overlapping symptom that is part of one bigger illness; mistaken worry and tiredness could be misdiagnosed as a sleep disorder and actually be a major depressive disorder (Pallay, 2010). They may also give themselves denial for symptoms that are much more dangerous. A heartache can be self-diagnosed as a general body ache, but could be part of heart disease (Pallay, 2010). Other users could diagnose themselves and use over-the-counter medication or at-home remedies that do not help. They may misuse medication that can harm themselves or even prolong the illness. Misinformation and self-diagnosis are dangerous phenomena that must not be overlooked.

It is important to understand TikTok's impact on misinformation to further understand the rise of mental illness around the world and ways to prevent misinformation surrounding mental illness. The purpose of this project is to investigate the rise of social media and self-diagnosed mental illnesses to determine if users find reliability in online platforms. A secondary purpose is to discover if the info they find online is reliable enough to self-diagnose themselves. This study will add to scholarly conversation on this topic by finding a correlation between the believability of TikTok and the notion of self-diagnosis.

This trend of self-diagnosis did not start with social media. A survey from 2013 found that one-third of Americans use the internet to self-diagnose (Kuehn, 2013). They used websites such as Google and WebMD. Another study found that three out of four Australians admit to searching the internet to diagnose medical

symptoms and six out of ten who go online for health information do so for the purpose of self-diagnosis (Robertson et al., 2014). These statistics show how prevalent self-diagnosis is on the internet and raises the question of whether diagnoses using sites such as WebMD are even reliable in the first place?

Researchers have analyzed information by WebMD symptom checkers to determine the accuracy of diagnosis. They found that the information and diagnosis given were "often inappropriate and that the diagnoses suggested are frequently inaccurate. Recommendations to seek emergency advice may cause inappropriate healthcare utilization." (Powley et al., 2016). Another study tested online self-diagnosis for hand surgery and physical disorders that are found in hands and arms. They found that the WebMD symptom checker "diagnoses were discordant with the surgeon's diagnosis" (Hageman et al., 2014). With WebMD being one of the most prominent online checkers, even the most popular symptom checkers are not reliable when it comes to diagnosis. A study by researchers Jutel and Lupton analyzed the quality of information from thirty-five self-diagnosed smartphone apps. They found that these apps "are for 'entertainment purposes only' and not designed to 'replace a diagnosis from a medical professional'" (Jutel & Lupton, 2015, p.134). In other words, these apps' ability to self-diagnose is questionable and lacks the proper ability to diagnose someone. However, these are studies with WebMD dating back to the mid-2010s. Are these trends still applicable to TikTok as well?

Researchers who analyzed the quality of the information in videos about diabetes on TikTok found that while some are reliable, users should exercise caution, "that TikTok is a powerful platform for disseminating diabetes-related information... the quality of information in the videos differed" (Kong et al., 2021, para. 21). Regarding mental disorders, researchers decided to analyze the top viewed videos on ADHD on TikTok to determine their reliability. They found that "Approximately half of all videos analyzed were misleading, and the misinformation they contain has the potential to contribute to health anxiety... additionally, viral trends on TikTok, "echo chambers" in social media, and romanticization of mental health symptoms (Yeung et al., 2022, np). Likewise, this was the same with videos on autism with researchers saying, "We found that 'informational' videos designed to educate the audience about aspects of autism culminated nearly 200 million views, and that

most of the information provided (73%) was inaccurate or overgeneralized” (Aragon-Guevara et al., 2023, p. 4). This therefore shows that while technology may advance, the information on such platforms still lacks the validity and reliability that healthcare professionals have today. The information on TikTok is not monitored as anyone with any background can post. WebMD at least had people with a medical background review the information. This is the major reason why TikTok videos are more likely to have unreliable information.

The focus of previous research has been not only to determine the reliability of self-diagnosis but also to analyze misinformation surrounding certain mental disorders. While previous research shows the inaccuracy of data online, it fails to look at the users searching and viewing this kind of content. In other words, do these people believe what they are viewing online? Additionally, the current body of research has yet to include investigations on social media as a venue for self-diagnosis. Finally, previous research deals with physical disorders and not mental illnesses. This final problem needs more attention than anything else. This study will build on and add to previous research by investigating the user’s perception of TikTok videos and focusing on mental illness rather than physical ailments. Additionally, I will ask if users are more likely to self-diagnose if they view the videos as reliable. I chose TikTok for its incredible user base, ease of use, and content.

The first hypothesis of this study is that TikTok users will believe the information they are watching is reliable with a secondary hypothesis that the users who find the information reliable will use TikTok for self-diagnosis.

## Method

### Participants

Participants ( $N=75$ ) were undergraduate students from a small Southeastern university who use social media, primarily TikTok. The ages of these individuals ranged from 18-27 ( $M = 19.49$ ,  $SD = 1.65$ ). There were 54 male participants and 21 female participants. A convenience sampling method was used to recruit participants.

### Instrumentation

Two instruments were used to obtain data: A demographic questionnaire and a social media questionnaire on the perception of mental illness and self-diagnosed disorders.

### *Demographic Questionnaire (See Appendix A)*

The questionnaire consists of 7 questions about demographic information. This includes age, gender, and class rank (sophomore, freshman, etc.). Students also reported whether they used social media, what type of social media, and how long they use it.

### *Social Media Questionnaire (See Appendix B)*

This questionnaire is self-made and comprises 7 questions. Participants were asked to rank their scores on a Likert-type scale from 1 (Not at all) to 7 (Very Much So). It was designed to measure and describe the participant’s perception of mental illnesses online. Participants were asked about how often they view videos, if they find them believable, and their idea of how reliable it is to self-diagnose.

### Design

This study utilized a questionnaire to determine the perception of TikTok users and the reliability to self-diagnose after viewing mental illness videos. Participants were given a questionnaire to fill out at any place and at any time. The descriptive and correlation designs aimed to assess the frequency of viewing videos about mental illness on TikTok and the perceptions of the reliability of those videos. Correlational analyses were conducted to investigate relationships between viewing behavior and views on the reliability of the information. Additionally, correlational analyses were used to identify behaviors (such as age, reliability measures, time on the app, etc.) with self-diagnosis on using TikTok videos.

### Procedure

Participants were approached and recruited either in person, by email, or by classroom professors. They were provided access to the electronic survey. After giving consent, the participants first completed the demographic survey and then the social media questionnaire. All answers are completely anonymous. The data was then collected to be analyzed. Not all correlations are presented, only significant and important correlations are reported below.

## Results

### Perceptions of the Reliability of Information on TikTok Videos

Descriptive and correlation measures were used to determine how reliable TikTok users found TikTok to be. It was hypothesized that college-aged users of

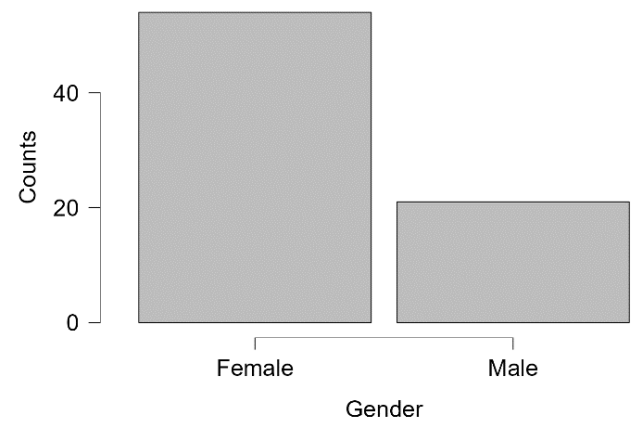
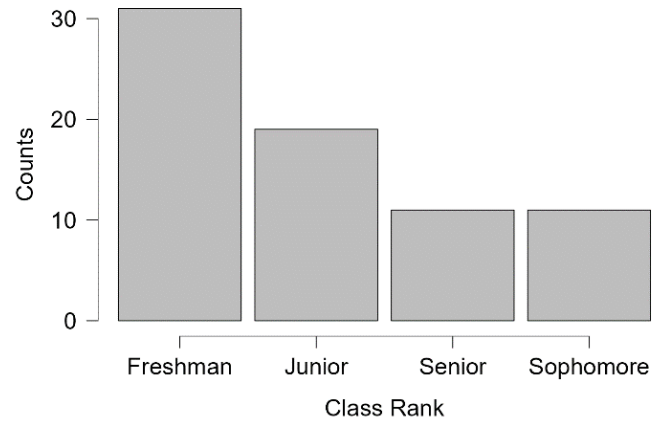
TikTok would find the information on TikTok videos reliable. This hypothesis was supported. Participants found the general information on TikTok moderately reliable ( $M = 3.50, SD = 1.34$ ) [Questionnaire 2 item 1] and found information on mental illness on TikTok also moderately trustworthy ( $M = 3.10, SD = 1.35$ ) [Questionnaire 2 item 3]. Users who found general information reliable had a positive correlation to trust the information on mental health videos ( $r = .45, p < .001$ ) [Questionnaire 2 item 1 and Questionnaire 2 item 3]. Watching mental illness videos more often was positively correlated with trusting said videos ( $r = .63, p < .001$ ) [Questionnaire 2 item 2 and Questionnaire 2 Item 3]. When asked about how long they use TikTok daily, the length of time watching videos corresponded with how likely they are to find the information reliable ( $r = .42, p < .001$ ) [Questionnaire 1 item 7 and Questionnaire 2 item 1]. This result is also seen with trusting mental health videos ( $r = .51, p < .001$ ) [Questionnaire 2 item 3]. Finally, when users watched mental illness videos more often, they also indicated the videos provided enough information to diagnose a mental illness ( $r = .54, p < .001$ ) [Questionnaire 2 item 2, Questionnaire 2 item 4]. In summary, users tended to find the information reliable that they received from both general information and mental health videos. Additionally, watching videos more often correlated with higher scores of trust and reliability.

**The Association Between Beliefs about Reliability of Information on TikTok and Willingness to Self-Diagnose**

Correlational measures were used to determine the relationship between reliability and self-diagnosis. It was hypothesized that users who found the information reliable would use TikTok to self-diagnose and that a higher perceived reliability would correlate with self-diagnosis. When users trusted mental illness videos, there was a positive correlation to finding the information reliable enough to diagnose mental illnesses ( $r = .57, p < .001$ ) [Questionnaire 2 item 3 and questionnaire 2 item 4] When users found the information reliable enough to diagnose a mental illness, they were more likely to use TikTok to self-diagnose ( $r = .43, p < .001$ ) [Questionnaire 2 item 4 and questionnaire 2 item 5]. There was also a small to moderate correlation between trusting general information on TikTok and the likelihood to diagnose oneself using TikTok ( $r = .37,$

$p = .002$ ) [questionnaire 2 item 1 and questionnaire 2 item 5]. This suggests that users who had higher scores on TikTok information reliability and trust also suggested they would TikTok to self-diagnose.

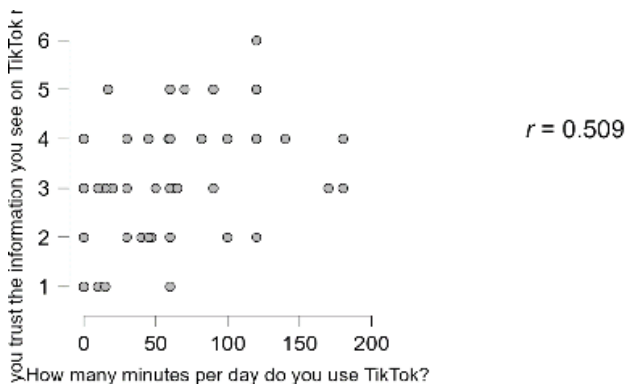
**Tables**



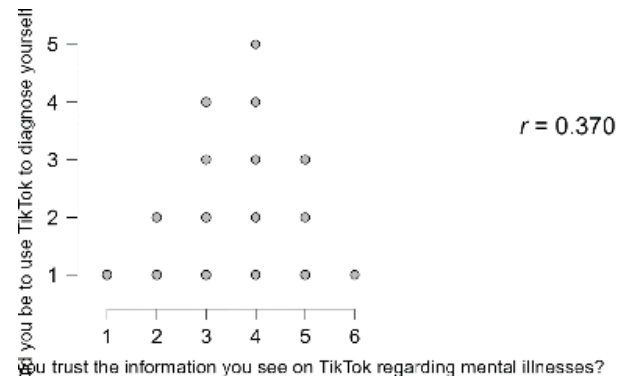
**Descriptive Statistics**

	Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
Age	75	0	19.493	1.647	18.000	27.000
How many minutes per day do you use TikTok?	75	0	53.960	48.813	0.000	180.000
How reliable do you find information on TikTok?	71	4	3.423	1.338	1.000	7.000
To what degree do you trust the information you see on TikTok regarding mental illnesses?	72	3	3.056	1.352	1.000	6.000

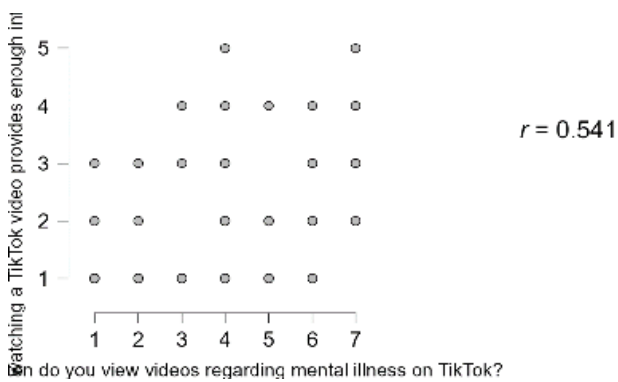
To what degree do you trust the information you see on TikTok regarding mental illnesses?



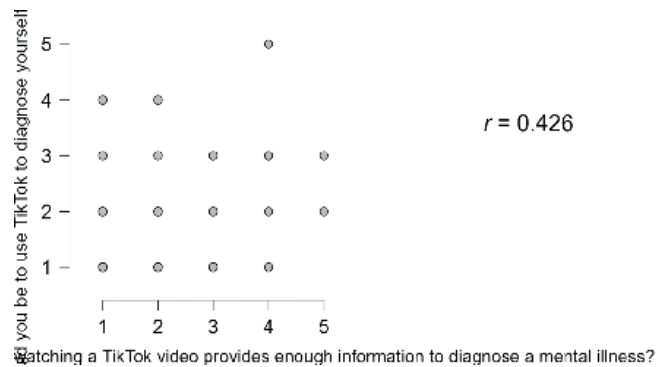
would you be to use TikTok to diagnose yourself with a mental illness?



How often do you view videos regarding mental illness on TikTok? vs. To what degree do you believe watching a TikTok video provides enough information to diagnose a mental illness?



To what degree do you trust the information you see on TikTok regarding mental illnesses? vs. To what degree do you believe watching a TikTok video provides enough information to diagnose a mental illness?



To what degree do you trust the information you see on TikTok regarding mental illnesses? vs. How likely

### Discussion

The purpose of this study was to analyze whether college students found TikTok videos reliable and used their perceived reliability to self-diagnose themselves with mental illnesses. The results supported the hypothesis used in this study. It was first hypothesized that college students would find the information on TikTok reliable and trustworthy. The mean data showed about half the participants found the information they viewed on TikTok reliable (on both general and mental illnesses). The data shows that not all users view videos the same way and indicates that it may be up to the person to decide what they view as reliable or not. However, half of the respondents did find the information they are viewing reliable. There were also positive correlations in time and reliability. More time online and viewing videos both on general topics and about mental illnesses specifically corresponded with higher score in trust and reliability of the information. It was also hypothesized that users who found TikTok videos reliable would indicate using TikTok for self-diagnosis. This was also supported in the results as an increase in the perceived reliability of information correlated with self-diagnosis likelihood using TikTok. This suggests that those who perceived information as reliable also chose that they would use TikTok to self-diagnosis. In other words, once people find the information reliable, they may begin to apply it to themselves. This relationship makes sense, for users to self-diagnose using TikTok they must find the information reliable enough to do so. However, as addressed in the previous sections, the misinformation regarding mental illness is dangerous with self-diagnosis as users can misdiagnose, mistreat, and harm others

with their misperceptions. It is important to note that this is a correlational measure and perceived reliability does not directly cause self-diagnosing. This study indicates that those who indicated they found videos reliable also indicated they would use TikTok to self-diagnose.

Participants not only indicated that the information they saw on TikTok as reliable but also reliable enough to diagnose mental illnesses in general. Trends also suggested that users would self-diagnose themselves in relation to their perceived reliability. Previous literature indicated that people use the Internet to self-diagnose physical and mental illnesses (Kuehn, 2013). Previous studies also examined that there was misleading information on TikTok regarding mental illness videos (Yueng et al., 2022). This study expands upon this literature by adding correlational evidence that internet users who view the information on TikTok as reliable also may self-diagnose themselves with a mental illness. Additionally, the platform contains misleading information about mental illnesses. With misleading information, viewers can get the wrong idea about a mental illness and use self-fulfilling prophecies to create maladaptive behaviors. With TikTok being an echo chamber, they may spread misinformation on the platform, harming more than themselves (Kong et al., 2021). It is important to recognize that the information on TikTok is not fact-checked or regulated and a therapist or doctor remains the best diagnosis for mental illness.

This study has many strengths. A large sample size of 75 participants was used. The survey results indicated a valid measure with statistical validity being found with positive scores and correlations. However, there are some weaknesses. Some users (13) did not have TikTok downloaded and still answered the survey (they refused to answer some questions). This may have skewed the data as the project was meant to discover relationships in the behavior of TikTok users. Another weakness is the sampling method used. Since a convenience sample was used on a small Southeastern college campus, the information cannot be strongly generalized to the population. A final weakness is that a survey was newly created for this study. There may be some biases or poor word choices that affected responses. The survey will have to go through further review to make changes. For example, the use of the word reliable is problematic. While reliability is more commonly defined as accuracy, other definitions label reliability as repeatability in measures. While the words are used interchangeably, the

word accuracy better reflects the definition rather than reliability and avoids confusion. Future studies should replace these words. Additionally, the measure was first validated with face validity which determines the quality of the measure at face value. This is a subjective validation tool that is not preferred over construct, criterion, or content validity. More testing is needed for the survey to determine its value.

For future research, many directions can be taken. Extending the sample size past the current set of college students and using probability sampling methods (over convenience) would increase the generalization to the population outside of this campus' college students. A different age range would be important to study. It may be the case that younger generations are more vulnerable and would self-diagnose disorders from what they see online. Studying an older generation would support this theory as well to see the generational difference in online interaction. The use of an actual experiment would determine the cause and effect of reliability on TikTok videos and look at what users find sufficient enough to diagnose. It may also be important to look into the actions of users after they find the information reliable. Whether they go to therapists, look up more information, or whether they stick to their intuition are important questions to ask during this time. Finally, looking into videos on specific mental illnesses may be important to determine if specific mental illnesses are more self-diagnosed than others.

Overall, the findings of this study indicate positive correlations between the perceived reliability of videos and using TikTok for self-diagnosis. TikTok users not only find the information they are viewing as reliable but also find TikTok sufficient enough to self-diagnose themselves with mental illnesses. However, the perceived reliability does not cause self-diagnosis but correlates with it. More research is needed to further analyze the phenomenon and provide direct causes and reasons for self-diagnosing.

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### Appendix A - Demographic Questionnaire

1. Age
2. Major
3. Class Rank
4. Gender
5. Do you use TikTok?
6. Do you have any other type of social media?
7. How many minutes per day do you use TikTok?

### Appendix B - Social Media Questionnaire

1. How reliable do you find information on TikTok?
2. How often do you view videos regarding mental illness on TikTok?
3. To what degree do you trust the information you see on TikTok regarding mental illnesses?
4. To what degree do you believe watching a TikTok video provides enough information to diagnose a mental illness?
5. How likely would you be to use TikTok to diagnose yourself with a mental illness?
6. To what degree do you believe diagnosing a mental illness using TikTok videos is as reliable as seeing a professional therapist?
7. To what degree do you believe diagnosing a mental illness using TikTok videos is as reliable as taking an online test?