Perception Inflation of ADHD Prevalence in American Adults After Watching TikTok Videos

Anley M. Longshore

Angelo State University

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Abstract

Social media is highly influential in many people's lives and even essential to many people's daily lives. TikTok is one of the fastest-growing social media platforms and is ranked in the Apple app store as the number one entertainment app. Mental health is a popular topic on TikTok with many pages dedicated to discussing mental health. Specifically, Attention-deficit/hyperactivity disorder has become a popular topic discussed on TikTok with billions of views under the hashtag ADHD. Under the #ADHD on TikTok, some videos share their personal experience with ADHD, some give examples of ADHD symptoms, and some even contain misleading information. This study hypothesized that participants' perception of the percentage of American adults who exhibit more than one ADHD symptom will increase after viewing generalized content about ADHD on TikTok. There was an increase in participants' perception of the percentage of American adults who exhibit more than one ADHD symptom. The implications of these findings will be further discussed.

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Introduction

TikTok is a social media platform that allows users to share short videos. This is different from other popular platforms such as Facebook, Twitter, or Instagram. TikTok is one of the fastest-growing social media platforms with more than 1 billion monthly active users (Dellatto, 2021). TikTok has a unique algorithm that determines the types of videos you will see on your FYP also known as For You Page. The videos you see are based on your viewing preferences and the types of videos you search or engage in. TikTok goes even as far as to track the time you spend watching a video to show you similar videos or if you scroll past it to show fewer videos like that one (Smith, 2021).

ADHD has become a hot topic on many social media platforms including TikTok with more than 11.2 billion views under the hashtag ADHD. According to Yeung et al. (2022), ADHD is one of the most viewed mental health hashtags and is currently the seventh most popular health-related hashtag on the platform. ADHD is a trending topic on TikTok increasing the risk of people being exposed to misinformation. Anyone can post videos on TikTok therefore the quality of the information offered, qualifications of the persons offering advice, or their conflicts of interest, are largely unknown (Zenone et al., 2021). This type of misinformation could lead people to self-diagnosing themselves or diagnose those around them.

A recent study reviewed 100 popular videos under the hashtag ADHD on TikTok. They chose their videos based on if the video specifically "described or educated viewers about: ADHD symptoms/diagnosis, lived experience with ADHD, or ADHD management" (Yeung et al., 2022). The results revealed that 52% of the videos were misleading and the videos related to personal experience were the most popular (Yeung et al., 2022). Even more concerning none of the misleading videos stated for viewers to do their own research and seek professional advice

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(Yeung et al., 2022). There has been an increase in adults being diagnosed with and a rapidly increasing frequency of a once-rare condition may reflect increased recognition or diagnostic epidemic (Paris et al., 2015). Social media could be playing a role in this increased recognition therefore possibly the overdiagnosis of ADHD.

Social media is a promising platform for researchers to be able to gain insight into naturalistic data on the experiences and public expressions of those living with ADHD (Guntuku et al., 2017). Considering TikTok is one of the fastest-growing social media platforms and the amount of ADHD misinformation that is shared on the platform. We sought to determine if a person's perception of the prevalence of American Adults that exhibit ADHD symptoms would increase after viewing TikTok videos under the hashtag ADHD. We hypothesize that participants' perception of the percentage of American adults who exhibit more than one ADHD symptom will increase after viewing generalized content about ADHD on TikTok.

Method

Design

This study aims to determine if participants' perception of ADHD rates in American adults inflates after viewing broad TikTok videos. To achieve this, we proposed a correlational within-group study. Proposing a within-group study would allow us to study the change over time by comparing a participant's first perception against their second. The study is labeled a correlational study because there is no random assignment of groups or manipulated variables. All participants were shown the same four videos, therefore, all we will be observing is if the viewing of the videos altered their perception of ADHD prevalence.

Participants

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The study was conducted online and available on SONA for all Angelo State University students to have access to. Extra credit was offered to those who took part in the study in any way. We accumulated a total number of 143 participants who took part in the study. We eliminated some submissions that did not answer the two questions regarding percentage estimation as well as submissions where the time spent taking the survey was so short that it would have been impossible for the participant to have watched the majority of each video. For this reason, we eliminated all participants who spent less than 100 seconds taking the survey. We also eliminated all submissions before the opening date of March 30, 2022, for these submissions were from members of our group testing the application and ensuring it was ready to be opened. We also excluded one sample after this date after an additional test from a group member, we distinguished this sample from the rest by the time stamp and the group member put his age as 60. Using our exclusion principles, we are left with a total of 80 participants.

Measures

To execute this study, we employed the use of PsychData to curate the questionnaire that was later uploaded to SONA. Beyond this software, we also included TikTok videos. The TikTok videos are chosen by the research team based on selective criteria. The video must use the hashtag #ADHD and no other mental disorders so that it is known that ADHD is being referenced, not any other mental disorder or ailment. The video must also list more than one symptom of ADHD, these can either be suggested by the creator, or real symptoms according to the DSM-5. Thirdly, the creators shown in the videos must be demographically different, both in race and in gender, to ensure underlying bias in the participant does not play a part. Additionally, the videos must list broad behaviors that can apply to a wide array of people, such as getting a

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person getting distracted with no parameters. Lastly, the video must imply the symptoms are the result of ADHD exclusively.

Procedures

To begin the study, the participant must read and sign an informed consent form in which they are debriefed regarding the following study. When completed, the participant could then progress to the next stage of the study.

At this stage, we asked participants to report what percentage of American Adults exhibit more than one symptom of ADHD. This question was phrased in the following multiple-choice question: What percentage of American adults do you think exhibit more than one symptom of ADHD? The answer choices to this question were as follows: A) less than 5%, B) 5-10%, C) 11-20%, and D) more than 20%. After answering the question, the participant must submit their response so that they cannot go back and alter their response after viewing the videos. After the completion of the first question, the participant will be asked to view four TikTok videos with generalized content making ADHD seem widely applicable. The videos are accessible through a link that will open a new tab in the browser. After viewing the four TikToks, the participant must check a box stating they viewed each of the videos. Checking this box will allow the participant to advance to the next step and will block them from reversing in the study.

Once the participants have advanced, they are then asked to complete the following multiple-choice question: How many American adults do you think **DO NOT** exhibit multiple symptoms of ADHD? This question has the following answer choices: A) less than 80%, B) 80-89%, C) 90-95%, and D) more than 95%. The second stage of questioning is intentionally

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reverse coded so that the participant is forced to put forth intentional thought. This is to keep the

person from simply circling the same answer given in the first stage of questioning.

After submitting the answer to this question, participants are led to the last part of our

procedure in which participants will be asked to fill out a demographic's questionnaire.

Participants were not required to give their age or gender but were required to answer the

question about their TikTok usage. The participants are asked about their age, preferred gender

(with the option of no response), and the time (measured in hours) per week they believe they

spend on TikTok. The question stated as: "How many hours do you believe you spend watching

TikTok videos on average per week?" The subsequent response choices would be: 0, 1-3, 4-6, 7-

9, 10-12, 13-15, more than 15. Asking the rough estimate of how much time the participant

spends on TikTok per week is important because if we do find viewing TikTok's has a reliable

influence on the perception of ADHD, it could be possible their original response might be

inflated from regular TikTok use.

<div align="center">Results</div>

A paired-samples t-test was conducted between the estimated percentage of American

adults that exhibit more than one symptom of ADHD and the estimated percentage of American

adults that DO NOT exhibit more than one symptom of ADHD. The percentage of American

adults that DO NOT exhibit more than one symptom of ADHD (*M*=3.48 *SD*= .675) had a slight

increase compared to the percentage of American adults that exhibit more than one symptom of

ADHD (*M*=3.18 *SD*=.897). The alpha level for the statistical test was set to 0.05. There was a

significant difference between the estimated percentage of American adults that exhibit more

than one symptom of ADHD and the estimated percentage of American adults that DO NOT

exhibit more than one symptom of ADHD with a significance level of 0.004

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Participants' ages ranged from 18 years old to 37 years old. There were 18 male participants, 61 female participants, and 1 non-binary participant. The percentages of participants' average weekly TikTok usage was 16.3% do not use TikTok or spend less than 1 hour, 17.5% spend 1-3 hours, 20% spend 4-6 hours, 22.5% spend 7-9 hours, 15% spend 10-12 hours, 2.5% spend 13-15 hours, and 6.3% spend more than 15 hours.

Discussion

The present study set out to examine if the perception of ADHD rates in American adults would increase after viewing TikTok videos related to ADHD. A significant difference was found between the estimated percentage of American adults that exhibit more than one symptom of ADHD and the estimated percentage of American adults that DO NOT exhibit more than one symptom of ADHD. The percentage of American adults that DO NOT exhibit more than one symptom of ADHD was reverse coded to be able to compare the two conditions.

The estimated percentage of American adults that DO NOT exhibit more than one symptom of ADHD had a slight increase compared to the estimated percentage of American adults that exhibit more than one symptom of ADHD which supports our hypothesis. The increase in the percentage of adults who exhibit ADHD symptoms after watching TikTok videos may be due to the content of the videos making ADHD seem more common than it is. Considering a study that took more than 100 videos under the hashtag ADHD on TikTok and found that more than half of the videos contained misleading information (Yeung et al.,2022). Misconceptions about ADHD could make it seem like ADHD is more prevalent or applicable than it is. Although ADHD is one of the most common mental illnesses, with an estimated prevalence of 3–12% in children and 2–6% in adults this is still a small percentage of the population (Godfrey et al., 2020). This study gives some insight into how much social media can

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influence our thoughts and behaviors. Considering how social media can influence our daily lives misinformation could potentially be dangerous.

There has been an uptick in people self-diagnosing themselves with mental disorders (Dounda, 2022). Specifically, TikTok has played a role in the influence of teenagers diagnosing themselves. Many behavioral health experts such as Dr. Adeola Adelayo have become concerned in the last year about the rise in teens and young adults who are self-diagnosing with conditions like ADHD, Obsessive Compulsive Disorder, Dissociative Identity Disorder, Autism, and Tourette's (Ollson, 2021). Michael Klinkner, a licensed clinical social worker says teens are especially susceptible to the influence of TikTok videos that they can get caught in a cycle where they believe they have mental illness even before developing symptoms (Dounda, 2022). TikTok is a great place to raise awareness and reduce the stigma around mental disorders. The platform also has its downsides, it has caused a proliferation of misinformation that has led many to believe they have a condition or disorder when they many not (Ollson, 2021). The more time a person spends on TikTok the more likely they are to be exposed to these types of videos.

Although we included the demographics questionnaire inquiring how many hours the participant spends on TikTok in a week. We chose not to run analyses on these data for the sake of simplicity and lack of time. We included the question because we hypothesized that if a significant amount of time was spent on the app per week, the participant may have already been exposed to ADHD videos on TikTok. For future research time spent on TikTok should be studied to determine if there is a correlation between the time spent on TikTok and the estimated prevalence of American Adults that exhibit ADHD symptoms.

Limitations

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One major limitation of our study was the inability to upload the TikTok videos into the survey as videos. The videos were accessible through a link that would open a new tab in the browser on the TikTok website. Unfortunately, towards the end of collecting data one of the videos was taken down. This possibly could have led students to be confused when asked if they watched all the videos in their entirety considering one video may not have been available to some of the participants.

Another limitation is the lack of time to collect data and run the appropriate tests. Participants were able to take the survey between March 30, 2022, and closed on April 21, 2022. Therefore, we had less than a month to gather data. Although we did have enough participants to complete the study, more participants could have potentially meant more precise results. More time could have potentially meant a more diverse sample of participants, 76% of our participants were female. Due to the deadline, we decided to run the paired samples t-test but with more time we could have explored the demographics questions.

Concluding Remarks

Results revealed that the estimated perception of ADHD rates in American adults increased after viewing TikTok videos related to ADHD. Literature supports that TikTok contains misleading information regarding mental health specifically ADHD. There is no current literature that examines the effects of TikTok videos related to the perception of mental illnesses. TikTok is one of the fastest-growing social media platforms but is the least studied of the major social media platforms (Zenone et al., 2021). Therefore, more research is needed.

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