Original Research

Quality Review of Online Resources in the Treatment of Depression

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Introduction: *Depression is a disease that plagues a high percentage of adults in the United States. Utilization of public online resources as a learning resource for those with depression is a new and upcoming tool. This study examined public online resources which provide information pertaining to the treatment of depression, rating the effectiveness of present resources.*

Methods/Results: *A YOUTUBE search was conducted to collect videos which could be used as resources to patients diagnosed with depression. Medical students then ranked these videos utilizing the DISCERN criteria, a tool established to determine the quality of patient resources. The rankings for each video were averaged for a variety of categories. These averages were then utilized to determine the overall quality of publicly available videos and to compare different aspects of the videos. The majority of categories were determined to have average ratings placing videos in the "partially met criteria" categories. Videos uploaded directly by physicians scored higher than those uploaded by non-physicians. Videos with greater than one million views performed slightly better than those with fewer views.*

PPI Statement: Patients and public were not involved in this research.

Conclusion: *There are many barriers to mental health care for those diagnosed with depression. Public online resources may help to eliminate these barriers. Despite this positive outlook, this study ranked the overall quality of the resources as "average". The inconclusive nature of this study calls for further research to be conducted. Barriers may be erased by online resources, but the effectiveness of online resources is not clear. More time must be granted to physicians to counsel their patients about mental health or more standardized online materials must be offered to patients.*

Keywords: Depression, Psychiatry

INTRODUCTION

Depression is a psychiatric condition that plagues a high percentage of the United States population[1]. Depression can alter one's daily life drastically and proper education is vital to living with a diagnosis of depression. In today's age of technology utilizing online resources as a learning tool is easy, efficient, and effective. This study examined public online resources which provide information pertaining to the treatment of depression, rating the effectiveness of present resources.

METHODS

To collect the videos utilized in the study which underwent DISCERN criteria ranking a YOUTUBE search was conducted. The search was conducted on June 6th, 2022. The search criteria utilized included the keywords "depression" and "treatment". The top fifty videos were then analyzed for content and length. Exclusion criteria was implemented, excluding all videos over 20 minutes long and those that were considered off topic. Following exclusion criteria implementation 21 videos were excluded, leaving 29 videos to be rated.

After viewing the videos two medical students were then

asked to rate the videos on a scale from one to five for a variety of questions. The questions were from a survey deemed the DISCERN criteria. The DISCERN criteria was developed by a group of researchers with the intention of giving providers a tool to determine the quality of treatment information they provide to their patients. The creation of the DISCERN criteria was achieved through rigorous testing and has been shown to be an accurate tool to rate treatment education materials.

A rating of five indicated a definite "yes" while a rating of one indicated a definite "no". Numbers two through four indicated the video partially met the criteria laid out in the question. Each video was rated for 16 questions. Questions 1-8 addressed the reliability of the video, questions 9-15 pertained to the information laid out about the treatment within the video, and question 16 is an overall rating of the video. The questions within the DISCERN criteria are as follows:

1. Are the aims clear?
2. Does it achieve its aims?
3. Is it relevant?
4. Is it clear what sources of information were used to compile the publication (other than the author or producer)?
5. Is it clear when the information used or reported in the publication was produced?
6. Is it balanced and unbiased?
7. Does it provide details of additional sources of support and information?
8. Does it refer to areas of uncertainty?
9. Does it describe how each treatment works?
10. Does it describe the benefits of each treatment?
11. Does it describe the risks of each treatment?
12. Does it describe what would happen if no treatment is used?
13. Does it describe how the treatment choices affect overall quality of life?
14. Is it clear that there may be more than one possible treatment choice?
15. Does it provide support for shared decision-making?
16. Based on the answers to all of the above questions, rate the overall quality of the publication as a source of information about treatment choices

RESULTS

The 29 videos that were analyzed via the DISCERN criteria were also analyzed via video characteristics. These characteristics included the amount of views, likes, and comments on each video. These characteristics were then averaged with the following resulting values. (Table 1).

Table 1. Video Characteristics

Category	*Average*
Video Views	614,985
Video Likes	10,983
Video Comments	2,739

After the videos were ranked by the students based on the DISCERN criteria each category's ratings were averaged. These values are presented in Table 2.

Table 2. DISCERN Criteria Ratings

Category	*Average*
1. Are the aims clear?	3.344827586
2. Does it achieve its aims?	3.413793103
3. Is it relevant?	3.413793103
4. Is it clear what sources of information were used to compile the publication (other than the author or producer)?	2.620689655
5. Is it clear when the information used or reported in the publication was produced?	2.620689655
6. Is it balanced and unbiased?	2.896551724
7. Does it provide details of additional sources of support and information?	2.793103448
8. Does it refer to areas of uncertainty?	2.068965517
9. Does it describe how each treatment works?	3.655172414
10. Does it describe the benefits of each treatment?	3.689655172
11. Does it describe the risks of each treatment?	1.931034483
12. Does it describe what would happen if no treatment is used?	1.75862069
13. Does it describe how the treatment choices affect overall quality of life?	3.379310345
14. Is it clear that there may be more than one possible treatment choice?	3.379310345
15. Does it provide support for shared decision-making?	3.137931034
16. Based on the answers to all of the above questions, rate the overall quality of the publication as a source of information about treatment choices.	2.929926108

These values are the average of the ratings given by medical students for all 29 reviewed videos. Ratings were given based on a scale from 1-5.

The majority of the categories within the DISCERN criteria resulted in an average that fell within the "partially fulfills" category. The only categories that fell outside of this rating category were categories 11 and 12. These two categories fell

within the rating indicating that the videos did not fulfill the criteria in any capacity.

Of the 29 videos 17 of the videos were uploaded by physicians. The remaining 12 were uploaded by a variety of non-physician sources. The overall average rating of these two categories are reflected in table 3. These ratings place both categories in the "partially meets" criteria category. The physician uploaded videos were rated higher on average than the non-physician uploaded videos.

Table 3. Video Ratings: Uploader Types

Uploader Type	*Average of Overall Rating*
Physician	3.14239881
Non-physician	2.786666667

This table displays the average of overall rating given to all videos uploaded to YOUTUBE directly by a physician versus those uploaded by a non-physician. These categories were determined by the YOUTUBE channel through which the videos were uploaded. The values were calculated by averaging the rankings for the videos in each category from the 16th DISCERN criteria question.

Of the 29 videos ranked 6 had over one million views. The average of the overall rating for these two categories is reflected in table 4. Both of these categories' averages were placed in the "partially meets" criteria category of the DISCERN criteria, with those videos with over a million views performing with only slightly higher rankings.

Table 3. Video Ratings: Number of Views

Uploader Type	*Average of Overall Rating*
Over One Million	2.88575
Under One Million	2.33333

This table displays the average overall rating of those videos with greater than one million views compared to those with less than one million views. The number of views was determined directly from YOUTUBE. The rating values are an average of the ratings given for the 16th question of the DISCERN criteria.

DISCUSSION

The prevalence of depression within the United States is a statistic that cannot be ignored. A nationally representative survey of adults in the United States found a 10 percent prevalence of unipolar depression within a 12-month period, and a 21 percent lifetime prevalence[1]. These high numbers of individuals who require psychiatric care places a large burden on primary care providers. Time constraints are a real challenge among American primary care physicians and depression is not spared in the detriment this limited time has on patient care[2]. Adequate treatment of depression is unique in that it requires a high level of patient engagement and can often not be cured with medication alone. It has been demonstrated that the most efficacious treatment for depression requires the combination of both psychotherapy and antidepressants[3]. Achieving success with psychotherapy requires the patient to attend therapy sessions. A feat that has many barriers including limited availability, accessibility, accommodation, affordability, and acceptability[4].

Overcoming all of these barriers seems an impossible feat, but the use of technology to aid primary care physicians could eliminate some of these challenges. Upwards of 92 percent of Americans have access to the internet[4]. By taking advantage of this access, primary care providers can offer home education about depression that is easily accessible and affordable. This benefits both patient and provider by creating more time in appointments to utilize discussing aspects of mental health care. 42% of adults in America with a diagnosed mental illness have reported being unable to receive necessary care due to their inability to afford care[4]. Public online resources erase this need for payment. Patients are able to utilize these services for free without a need for transportation, making an appointment, or insurance coverage.

Despite these assumed benefits our results in this study place the overall rating of the accumulated videos within the central rating category. This indicates that the overall rating of the videos is deemed "average" placing the quality determination on individual physician opinion. The study did conclude that those videos posted by physicians were rated higher than those posted by non-physicians. This indicates that counseling by physicians is most effective. Therefore, physicians should continue to counsel in their own offices or recommend those videos posted by other physicians.

CONCLUSION

The inconclusive nature of our study indicates that more research must be done to conclude if online resources are effective in counseling those patients diagnosed with depression. Online resources erase many barriers to care that are present within the mental health care sphere. Despite these benefits our study does not clearly demonstrate an overwhelming effectiveness of these resources. Therefore,

physicians must be granted more time to counsel their patients with mental health within the office or more standardized online materials must be offered to patients.

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