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YouTube as a Source of Information About Premature Ejaculation Treatment

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ABSTRACT

Introduction: An increasing number of patients are seeking premature ejaculation (PE) therapy online. Although health care information on the Internet about PE is abundant, the quality of information about its treatment on YouTube, the most visited online video streaming service, is unknown.

Aim: The aim of this study was to assess the role of videos pertaining to the treatment of PE through YouTube.

Methods: A cross-sectional study was performed through YouTube using the keywords "cure premature ejaculation," "end premature ejaculation," "stop premature ejaculation," or "premature ejaculation treatment." The videos were sorted as reliable or nonreliable by 2 urologists as they may contain scientifically proven information or not. Nonrelevant, non-English, and silent videos were excluded. Video demographics were analyzed by the quality and source of the video.

Main Outcome Measures: A 5-point global quality scale, a 5-point modified reliability (DISCERN) tool, kappa statistic, the intraclass correlation coefficient, and descriptive statistics in the form of proportions and percentages were used.

Results: Of the 800 videos, 668 were excluded because they were duplicates ($n = 389$), irrelevant ($n = 49$), not in English ($n = 284$), or had no audio ($n = 51$). Of the 132 videos, 93 (70%) were described as reliable and 39 (30%) as nonreliable. The kappa statistic for interobserver agreement was 0.832. In the reliable information group, the reliability (2.55 ± 1.03) and quality scores of the contents (2.74 ± 1.06) were statistically higher than those in the nonreliable information group (0.23 ± 0.53 and 1.15 ± 0.48, respectively; $P < .05$). The majority of the nonreliable information group comprised medical advertisement/for-profit companies (51%) and individuals (41%). There was no significant difference between the reliable and nonreliable information groups in terms of average views ($P = .873$) and viewed videos per day ($P = .538$).

Clinical Implications: Evaluating videos about the management of PE holds promise for understanding what men are exposed to.

Strength & Limitations: The study simultaneously investigated the quality and accuracy of YouTube videos by several aspects using validated instruments. As for limitations, there is no consensus in the literature regarding how to assess health care-related online videos, and the results were not derived from patients' perceptions.

Conclusion: The study highlights data about the treatment of PE on YouTube. Videos with reliable information outnumbered those with nonreliable information. This is the first study to demonstrate that YouTube is an important source of data on PE management. Physicians and health care providers should contribute reliable content, and YouTube should remove deceptive videos before patients watch them **Gul M, Diri MA. YouTube as a Source of Information About Premature Ejaculation Treatment. J Sex Med 2019;XX:XXX–XXX.**

Key Words: Premature Ejaculation; YouTube; Internet; Treatment; Cure

INTRODUCTION

Premature ejaculation (PE) is one of the most common sexual dysfunctions among men worldwide, with a prevalence of around 5%.[1] It affects not only men but also women in terms of sexual relationships, emotional distress, and interpersonal difficulties. However, patients are reluctant to discuss their symptoms and experiment broad ranges of self-support methods.[2] Only a small

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proportion of these patients seek professional help. Thus, many of them may remain misdiagnosed or mistreated.[3]

The barriers motivating patients to delay or defer seeking professional help include the feeling of embarrassment and the belief that the disease will resolve by itself.[4] Moreover, many patients with PE believe that they will be labeled as premature ejaculators if they take active steps to disclose their PE.[4]

The Internet has become a useful tool for obtaining health care information, and approximately 50% of American adults used the Internet in 2011 to seek answers to their health care problems.[5,6] According to the Sandvine[7] 1H2018 Global Internet Phenomena Report, YouTube, one of the biggest online video streaming services, is now responsible for 11.4% of worldwide downstream traffic in megabytes. An inevitable result of this is the use of YouTube as a source of medical information. Several studies have already scrutinized the quality of medical information in YouTube videos, including videos on cervical cancer, breast examination, and rheumatoid arthritis.[8−10] However, currently, there is no data on the quality of PE-treatment videos on YouTube.

People who are exposed to misleading information about the treatment of PE may make the wrong decisions and/or seek treatment. We believe that evaluating commonly viewed videos on YouTube might reveal what patients with PE are exposed to outside the clinical encounter. Therefore, we aim to evaluate the content, reliability, and quality of the most relevant YouTube videos on the treatment of PE.

METHODS

Search Strategy and Data Collection

On YouTube, the keywords "cure premature ejaculation," "end premature ejaculation," "stop premature ejaculation," and "premature ejaculation treatment" were searched. Relevance-based ranking was used to sort the related videos. Most people have shown the tendency to click on a result within the very first pages of search results.[11] Therefore, we included only the first 200 of the results.[10] After saving the search results in a playlist, 2 independent researchers (urologists, M.G. and M.A.D.) viewed and analyzed the videos. In case of duplicate videos, only 1 was considered. Exclusion measures were adopted from similar previous studies as nonrelevant videos, non-English videos, or videos that had no accompanying audio.[8,10,12]

Video Parameters and Scoring System

For each video, the number of views, likes, dislikes, comments, and the video length were collected. In addition, the upload time of the videos was recorded for calculating the video rating as views per day. To evaluate the accuracy of the videos, 2 information groups were formed: reliable and nonreliable. This method has already been used in several studies.[10,13] The detailed group classification is as follows:

1. Reliable information: If the video contained scientifically correct information about treatment of the disease, like psychological/behavioral strategies, such as stop−start program, squeeze technique, or sensate focus masturbation before sexual intercourse; pharmacotherapy, such as dapoxetine, other off-label antidepressants, topical anesthetic agents, tramadol, phosphodiesterase-5 inhibitor (PDE5i), or combination treatments; and other scientifically proven managements, including acupuncture and modanafil.

2. Nonreliable information: If the video contained scientifically unproven information (eg, unsubstantiated claims about treating PE with herbal medicine for which no proof exists in the literature), promoting any scientifically unproven topical application to the glans penis to delay ejaculation, claims of some types of breathing techniques, etc. If a video contained both reliable and nonreliable information, it was classified as group 2. In the event of a discrepancy, consensus arbitrated the disagreement.

In addition, the videos were classified in terms of their source into 4 groups as follows: source 1, universities or nonprofit physicians or professional organizations; source 2, health information websites; source 3, individual users; and source 4, medical advertisement or for-profit organizations.

Furthermore, the videos were classified into 3 groups according to the sex of the speaker targeting the audience as female, male, and both sexes. Moreover, the videos were divided into 4 groups according to the speaker giving the explanation as physician, non-physician health provider (sexologists, etc.), individuals, and external voice.

DISCERN is a validated tool comprising 15 questions, each scored on a 5-point scale that is used to evaluate the quality of health information available to patients regarding treatment options, developed by Charnock et al.[14] We used a 5-point modified DISCERN tool, used in previous studies, to score the reliability of the videos.[8,10,15]

To determine the overall quality of the videos, Global Quality Score (GQS), a 5-point scale, was used (GQS: 1 = poor quality; 5 = excellent quality). This tool incorporates the accessibility of the information within the video, quality of the information, and overall flow of information.[16]

Statistical Analysis

The Statistical Package for the Social Sciences version 23 software (SPSS, Chicago, IL, USA) was used for all statistical analyses. Mean ± SD and median represent the numerical variables. For the comparison of numerical and categorical variables, Student's *t*-test, chi-square test, Fisher's exact test, and ANOVA were used. A P value of $< .05$ was considered statistically significant. Inter-rater agreement was determined using Cohen's kappa score. Interobserver reliability was quantified by calculating the intraclass correlation coefficient. The Kolmogorov−Smirnov test was used to test the normality of the data distribution.

RESULTS

After using multiple search key terms, the first 200 results were retrieved and screened for inclusion and exclusion criteria. A total of 668 videos were excluded because they were irrelevant ($n = 49$), not in English ($n = 284$), or had no audio ($n = 51$). 389 videos that were found as duplicated were included as 105 videos. Finally, 132 videos were included and further analyzed accordingly (Figure 1). The level of agreement between the 2 investigators was positive when classifying the videos as reliable and nonreliable (kappa coefficient = 0.823). The intraclass correlation coefficient was calculated as 0.970 for DISCERN and 0.962 for GQS, representing excellent agreement for both tools. The included videos ($n = 132$) were classified into reliable (70%) and nonreliable (30%) information groups. Approximately 40% of the videos were posted by individuals ($n = 52$), fewer videos were posted by medical advertisement/for-profit companies ($n = 38$; 28%), by universities/professional organizations/nonprofit physician/physician groups ($n = 28$; 21%), and by stand-alone health information websites ($n = 14$; 10.5%). In the nonreliable information group, recommended treatment modalities widely varied. The harmless cures were various types of vegetables/fruits, followed by homeopathic remedies, whereas topical applications to the glans penis, such as herbal pastes and toothpaste, were determined as more harmful.

Table 1 shows the characteristics of videos with reliable and nonreliable information. There was no significant difference between the 2 groups in terms of average views, video length, and views per day. A statistically significant difference was observed in favor of the reliable information group in terms of likes, reliability score, and GQS ($P < .05$), whereas a statistically significant difference was observed in favor of the nonreliable information group with respect to dislikes and comments ($P < .05$; Table 1). Table 2 demonstrates the analysis of reliable and nonreliable videos according to their source of upload. According to analysis, the most reliability scores and GQS values came from universities, professional organizations, and nonprofit physician/physician groups, whereas the least valuable outcomes were from medical advertisement/for-profit companies.

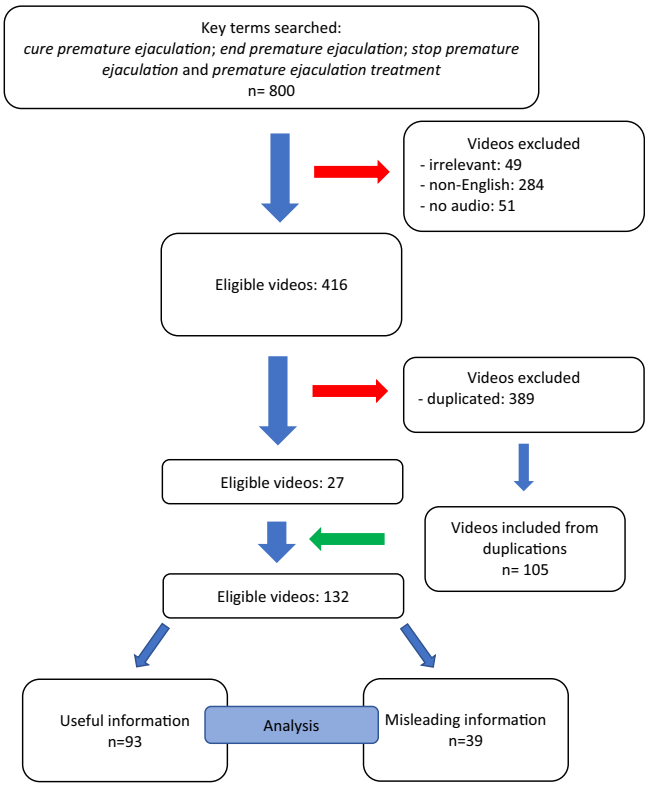

Figure 1. Selection of appropriate YouTube videos for the study. Figure 1 is available in color online at www.jsm.jsexmed.org

DISCUSSION

YouTube has launched local versions in >91 countries, and >1.9 billion logged-in users visit each month, since the first introduction in September 2005.[17] Every day, people around the world watch over a billion hours of videos and produce thousands of content.[17] Therefore, an enormous amount of medical data is being delivered to people who seek quick and free responses to their health problems. In addition, this source is used by health care providers, professionals, or others to inform people as well as increase their professional/name recognition or make money. To date, several studies have scrutinized the role of YouTube videos as an information source, such as for benign prostate hyperplasia,[18] self-breast examination,[10] cervical cancer,[9] glioblastoma,[19] myocardial infarction,[20] schizophrenia,[21] rheumatoid arthritis,[8] and social media addiction.[22] To the best of our knowledge, this is the first study to investigate the quality and content of YouTube videos on the treatment of PE.

The videos included in this study had >25 million views in total, which means PE videos are extremely popular on YouTube. A higher statistical difference found between the reliable and nonreliable information groups in terms of the DISCERN and GQS indicates that videos in the reliable information group are more consistent and have higher overall quality. However, no significant difference was found between reliable and nonreliable information regarding video views per day. This demonstrates that people are being exposed to both reliable and nonreliable information at similar rates for PE videos, and they cannot distinguish the good from the bad.

Furthermore, these results confirmed that nonreliable videos deliver scientifically unconfirmed endorsements ranging from innocent to potentially very dangerous cures for PE. The most harmless cures were home remedies comprising vegetables/fruits or their blends, such as onion, bee pollens, asparagus, almond, ginger, saffron, cinnamon, okra, and betel nut. However, such types of remedies could cause allergies or possible drug interactions in chronic drug users. Conversely, toothpaste application to the glans penis and supplements with unknown ingredients were determined as health-threatening cures. Because of the composition of toothpaste (sodium fluoride, triclosan,

Table 1. Analysis of video characteristics by accuracy

	Reliable information N = 93	Nonreliable information N = 39	*P* value
Average views	179,000 ± 42,000	161,900 ± 34,600	.873*
Video length (min)	7.11 ± 2.71	6.26 ± 3.37	.545*
Duration on YouTube (months)	62.1 ± 46.5	59.4 ± 48.2	.426*
Views per day	7750 ± 310	6590 ± 370	.538*
Likes	2199 ± 1850	634 ± 538	**.002***
Dislikes	241 ± 201	636 ± 411	**.018***
Comments	315 ± 264	730 ± 709	**.019***
Reliability score	2.55 ± 1.03	0.23 ± 0.53	**.006***
GQS score	2.74 ± 1.06	1.15 ± 0.48	**.002***
Source of upload, *n*			**.002**†
Universities/professional organizations / nonprofit physician/physician groups	27	1	
Stand-alone health information websites	12	2	
Medical advertisement/for profit companies	18	20	
Individual	36	16	
Speaker, *n*			.477‡
Physician	18	9	
Non-physician health provider	45	6	
Individual in the video	15	9	
External voice	15	15	
Sex, *n*			.569‡
Female	27	12	
Male	81	21	
Both	9	6	

Values of $P < .05$ was accepted as significant and marked bold.
GQS = Global Quality Score.
*Independent sample *t*-test.
†Fisher's exact test.
‡Chi-square test.

silicon dioxide, talc powder, etc.), it may cause abrasion, irritation, infection, or even more severe adverse effects on the glans penis. Moreover, supplements with unknown ingredients may pose a significant safety risk for patients because they mostly lack standardized manufacturing procedure and information on the actual composition. Indeed, some of them contain active pharmaceutical ingredients.[23] In a report analyzing the ingredients of a supplement promoted for sexual performance enhancement, dapoxetine was isolated.[24] Homeopathic remedies are commonly recommended as a treatment option for PE. Homeopathic treatment is described as "a transient worsening of the patients' symptoms before an expected improvement occurs"[25] and considered as a complementary medicine. Although it is very popular among patients and health care providers, its safety profile is still obscure.[25] In our results, we observed that several homeopathic medicines were suggested for different scenarios of PE. Although agnus castus is the most recommended homeopathic medicine in case of PE with diminished sexual drive, phosphorus was the choice of treatment in case of PE with impotency. Staphysagria, titanium, china, and selenium are other common forms of homeopathic medicines recommended for PE. Whatever is the ingredient, overdose of these medicines is of debate and highly related with their dilution rates.[25] Our analysis demonstrated that nonreliable suggestions mostly come from medical advertisement/for-profit companies or individuals. Moreover, the source of herbal and homeopathic recommendations was mainly Asian narrators.

Basically, physicians should provide more reliable data. However, our search revealed that physicians also contributed nonreliable information in promoting their own products. These results were similar to those in a study evaluating the effects of YouTube videos on breast examination.[10] Authors found that reliable and nonreliable information groups have similar rates in terms of narrator as physician, and the source of the uploader is more important when reliable data is sought. Similarly, videos recorded by universities, professional organizations, or nonprofit physician groups had higher GQS and reliability scores compared with those by other sources.

When evaluating the effect of YouTube on certain health problems, the majority of the videos were found as nonreliable.[8,10,26] In a recent systematic review, it was shown that several YouTube videos contain incorrect or nonreliable information regarding health care.[27] Contrarily, we showed that videos with reliable information are outnumbered by the number of nonreliable videos. This can be attributed to the other means

Table 2. Analysis of video characteristics by the source of upload

	Universities/professional organizations/nonprofit physician/physician groups	Stand-alone health information websites	Medical advertisement/ for-profit companies	Individual	*P* value
Video number (n)	28	14	38	52	
Reliability score	4.25 ± 0.85	3.00 ± 0.95	0.56 ± 0.90	2.13 ± 1.40	**.001***
GQS score	3.55 ± 1.60	3.00 ± 0.85	1.25 ± 0.60	2.60 ± 1.05	**.001***
Average views	93,500 ± 54,700	149,000 ± 420,150	290,000 ± 405,000	128,000 ± 339,000	.654*
Video length (min)	4.06 ± 3.25	5.15 ± 2.92	5.31 ± 2.87	5.20 ± 3.05	.766*
Views per day	2,200 ± 2,650	3,200 ± 2,920	3,200 ± 3,290	4,400 ± 3,760	.111*
Likes	255 ± 224	293 ± 705	2,965 ± 5,743	952 ± 1,830	.254*
Dislikes	34 ± 125	69 ± 188	243 ± 415	56 ± 100	.243*
Comments	87 ± 145	65 ± 127	307 ± 655	137 ± 324	.528*
Speaker, (n)					.274†
Physician	8	2	10	7	
Non-physician health provider	4	3	14	30	
Individual in the video	4	3	8	9	
External voice	4	13	7	6	
Sex, (n)					.859†
Female	5	9	10	15	
Male	12	7	31	52	
Both	5	3	6	1	
Reliable information (n)	1	2	20	16	**.002†**
Nonreliable information (n)	27	12	18	36	**.001†**

Values of $P < .05$ was accepted as significant and marked bold.
GQS = Global Quality Score.
*One-way ANOVA test.
†Fisher exact test.

of PE treatment, such as psychosexual therapy and pelvic floor exercises. Although traditional management is focused on pharmaceutical prescription, such as dapoxetine, tramadol, lidocaine, and PDE5i,[28] in the reliable videos group, we defined several videos recorded by sex therapists or coaches endorsing psychological or behavioral strategies, including the "stop—start" program developed by Semans,[29] "squeeze" technique proposed by Masters and Johnson,[30] masturbation before sexual intercourse, and several other suggestions to reduce anxiety. Other contributing videos to reliable information were pelvic floor rehabilitation videos, such as Kegel exercises, yoga, and squat. Although the role of pelvic floor muscle training on PE is not completely understood, a recent systematic analysis demonstrated that pelvic floor muscle training is an effective therapy for PE.[31] Therefore, they were also counted as reliable videos.

In a recent study, Gul and Kaynar[2] investigated the content and quality of Internet-based information on PE. They used search engines like Google, Yahoo, and Bing to examine the websites pertaining to PE and indicated that most of the websites included in the study had a broad range of quality, which was mostly of low quality.[2] These results are inconsistent with our findings because we showed that videos on YouTube are often of certain caliber. The difference between the 2 studies can be explained by the different tools used to measure the quality of content about PE. Moreover, search engines like Google, Yahoo, and Bing have some flaws in terms of their ranking methods when a search is returned.

Furthermore, counterfeit drugs, especially PDE5is, are very popular in the illegal market. They can be purchased from street peddlers or even drug stores and can cause serious health problems because of their contaminant ingredients and unsterile condition.[32] They are also a component of a supplement for sexual enhancement.[33] In our search, we realized that several counterfeit drugs recommended as a cure for PE were a compound of sexual enhancer supplements. However, the videos related to these supplements were mostly without audio, providing little information about ingredients, and referring to their websites for sale. Therefore, they were excluded from our analysis. Thus, PDE5is are considered as an option for patients with erectile dysfunction as well as for those with PE. Because of the overlapping coexistence of PE and erectile dysfunction[33] and PDE5is' effect on decreasing postejaculatory refractory time,[34] patients may intend to buy these supplements to improve their PE and sexual performance. Moreover, medication sold on the Internet for the treatment of PE may also contain undisclosed PDE5i.[35] YouTube must give utmost

importance in ruling out such videos once they are uploaded online.

The present study has the following limitations. First, there is no consensus in the literature regarding how to assess online videos related to health care problems. However, we used the most common methods determined in the narrative analysis of medical YouTube videos and the methods for their evaluation.[27] Second, snapshot analysis was used, and we fixed the contents as a playlist. However, contents of videos related to PE may change over time due to the dynamic nature of YouTube. Third, we only included English-language videos. Therefore, using other languages could have provided different search results. Moreover, this study was not implemented on actual patients. Therefore, precise conclusions, such as what patients really understand or are exposed to, cannot be drawn. Furthermore, we used modified DISCERN score to assess the reliability of the videos because it was previously used in 3 other studies.[8,10,15] However, it has still not been formally validated. Finally, we might have missed some reliable or nonreliable videos due to our search terms. However, we assumed that uploaders generally intend to use the "premature ejaculation" phrase either in their title or keywords. Thus, we may have encountered the video that is supposed to be missed somewhere in the search list. Therefore, the effect of this limitation might be minimal. Despite these limitations, the present study can be considered as a snapshot of the current PE treatments in YouTube videos.

CONCLUSION

Although men are exposed to a broad range of PE-related treatment information on YouTube; the quality of material is mainly good. However, there are also several videos that may be dangerous for individuals. The role of physicians and other health care organizations should be to upload more accurate videos, whereas YouTube should immediately remove the videos containing nonreliable information that can be dangerous for the health of men.

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REFERENCES

1. Althof SE, McMahon CG, Waldinger MD, et al. An update of the International Society of Sexual Medicine's guidelines for the diagnosis and treatment of premature ejaculation (PE). Sex Med 2014;2:60-90.
2. Gul M, Kaynar M. Evaluating the content and quality of information about premature ejaculation on the Internet: What are men being exposed to? *Andrologia*, https://doi.org/10.1111/and 12612; E-pub ahead of print.
3. Dunn KM, Croft PR, Hackett GI. Sexual problems: A study of the prevalence and need for health care in the general population. Fam Pract 1998;15:519-524.
4. Sotomayor M. The burden of premature ejaculation: The patient's perspective. J Sex Med 2005;2(Suppl. 2):110-114.
5. Amante DJ, Hogan TP, Pagoto SL, et al. Access to care and use of the Internet to search for health information: Results from the US National Health Interview Survey. J Med Internet Res 2015;17:e106.
6. LaValley SA, Kiviniemi MT, Gage-Bouchard EA. Where people look for online health information. Health Info Libr J 2017;34:146-155.
7. Sandvine. The Global Internet Phenomena Report, October 2018. Available at: https://www.sandvine.com/press-releases/sandvine-releases-2018-global-internet-phenomena-report.2018.
8. Singh AG, Singh S, Singh PP. YouTube for information on rheumatoid arthritis–A wakeup call? J Rheumatol 2012;39:899-903.
9. Adhikari J, Sharma P, Arjyal L, et al. YouTube as a source of information on cervical cancer. N Am J Med Sci 2016;8:183-186.
10. Esen E, Aslan M, Sonbahar BÇ, et al. YouTube English videos as a source of information on breast self-examination. Breast Cancer Res Treat 2019;173:629-635.

11. Megaly M, Khalil C, Tadros B, et al. Evaluation of educational value of YouTube videos for patients with coeliac disease. **Int J Celiac Dis 2016;4:102-104.**
12. Wong K, Doong J, Trang T, et al. YouTube videos on botulinum toxin A for wrinkles: A useful resource for patient education. **Dermatol Surg 2017;43:1466-1473.**
13. Sood A, Sarangi S, Pandey A, et al. YouTube as a source of information on kidney stone disease. **Urology 2011; 77:558-562.**
14. Charnock D, Shepperd S, Needham G, et al. DISCERN: An instrument for judging the quality of written consumer health information on treatment choices. **J Epidemiol Community Health 1999;53:105-111.**
15. Garg N, Venkatraman A, Pandey A, et al. YouTube as a source of information on dialysis: A content analysis. **Nephrology (Carlton) 2015;20:315-320.**
16. Bernard A, Langille M, Hughes S, et al. A systematic review of patient inflammatory bowel disease information resources on the World Wide Web. **Am J Gastroenterol 2007;102:2070-2077.**
17. Press - YouTube. Non-commercial use of YouTube videos in the press. Available at: https://www.youtube.com/intl/en-GB/yt/about/press/.2019.
18. Tanwar R, Khattar N, Sood R, et al. Benign prostatic hyperplasia related content on YouTube: Unregulated and concerning. **Recenti Prog Med 2015;106:337-341.**
19. ReFaey K, Tripathi S, Yoon JW, et al. The reliability of YouTube videos in patients education for glioblastoma treatment. **J Clin Neurosci 2018;55:1-4.**
20. Pant S, Deshmukh A, Murugiah K, et al. Assessing the credibility of the "YouTube approach" to health information on acute myocardial infarction. **Clin Cardiol 2012;35:281-285.**
21. Nour MM, Nour MH, Tsatalou OM, et al. Schizophrenia on YouTube. **Psychiatr Serv 2017;68:70-74.**
22. Balakrishnan J, Griffiths MD. Social media addiction: What is the role of content in YouTube? **J Behav Addict 2017; 6:364-377.**
23. Lebel P, Gagnon J, Furtos A, et al. A rapid, quantitative liquid chromatography-mass spectrometry screening method for 71 active and 11 natural erectile dysfunction ingredients present in potentially adulterated or counterfeit products. **J Chromatogr A 2014;1343:143-151.**
24. Li L, Low M-Y, Ge X, et al. Isolation and structural elucidation of dapoxetine as an adulterant in a health supplement used for sexual performance enhancement. **J Pharm Biomed Anal 2009;50:724-728.**
25. Stub T, Musial F, Kristoffersen AA, et al. Adverse effects of homeopathy, what do we know? A systematic review and meta-analysis of randomized controlled trials. **Complement Ther Med 2016;26:146-163.**
26. Basch CH, Hillyer GC, MacDonald ZL, et al. Characteristics of YouTube(TM) videos related to mammography. **J Cancer Educ 2015;30:699-703.**
27. Drozd B, Couvillon E, Suarez A. Medical YouTube videos and methods of evaluation: Literature review. **JMIR Med Educ 2018;4:e3.**
28. Ciocanel O, Power K, Eriksen A. Interventions to treat erectile dysfunction and premature ejaculation: An overview of systematic reviews; *Sex Med*, https://doi.org/10.1016/j.esxm.2019.06.001; E-pub ahead of print.
29. Semans JH. Premature ejaculation: A new approach. **South Med J 1956;49:353-358.**
30. Titchener JL. Human sexual inadequacy. By W. H. Masters and V. E. Johnson. Little, Brown, Boston. 487 pp. 1970. **Teratology 1971;4:465-467.**
31. Myers C, Smith M. Pelvic floor muscle training improves erectile dysfunction and premature ejaculation: A systematic review. **Physiotherapy 2019;105:235-243.**
32. Pullirsch D, Bellemare J, Hackl A, et al. Microbiological contamination in counterfeit and unapproved drugs. **BMC Pharmacol Toxicol 2014;15:34.**
33. Balasubramanian A, Thirumavalavan N, Srivatsav A, et al. An analysis of popular online erectile dysfunction supplements. **J Sex Med 2019;16:843-852.**
34. Chiang J, Yafi FA, Dorsey PJ Jr, et al. The dangers of sexual enhancement supplements and counterfeit drugs to "treat" erectile dysfunction. **Transl Androl Urol 2017;6:12-19.**
35. Dean J, Klep R, Aquilina JW. Counterfeit dapoxetine sold on the Internet contains undisclosed sildenafil. **Int J Clin Pract 2010;64:1319-1322.**