Karya J Health Sci. 2023; 4(2): 169-173
ARAŞTIRMA MAKALESİ/RESEARCH ARTICLE doi: 10.52831/kjhs.1344517 e-ISSN:2717-9540

KARYA JOURNAL OF HEALTH SCIENCE

journal homepage: www.dergipark.org.tr/kjhs

THE READABILITY AND QUALITY OF ONLINE HEALTH INFORMATION ON PLANTAR FASCIITIS

PLANTAR FASCİİTTE ONLİNE SAĞLIK BİLGİLERİNİN OKUNABİLİRLİĞİ VE KALİTESİ

Günseli Usgu[1*], Erkin Oğuz Sari[1]

[1]Department of Physiotherapy and Rehabilitation, Faculty of Health Sciences, Hasan Kalyoncu University, Gaziantep, Turkey

ABSTRACT

Objective: The quality and readability of internet resources about a common disease gain importance as a research topic. This study aims to quantitatively evaluate the quality and readability of the freely available online health information on plantar fasciitis.

Method: Google search engine was used to search the "plantar fasciitis" term and the first 200 websites evaluated. The quality of the information on the websites was assessed using the Journal of the American Medical Association (JAMA) score and the Health On the Net Foundation Code of Conduct (HONcode) certification. The readability of the online content was evaluated by two separate scores: The Flesch-Kincaid (FK) grade level and the Simple Measure of Gobbledygook (SMOG).

Results: A total of 162 websites were evaluated. The FK and SMOG level of websites were 7.06±1.8 and 6.65±1.4, respectively. The JAMA Score was 2.21±1.2. Only 27 (16.7%) of the websites had a HONcode, whereas 135 (83.3%) did not. Commercial and Professional websites were found the lowest credible source.

Conclusion: The online information about plantar fasciitis is variable and poor quality. We believe that the highest quality content can be found on health portals. Patients should be careful when reading information about plantar fasciitis from commercial websites.

Key Words: Plantar Fasciitis, Individual Health, Web Usage

ÖZ

Amaç: Yaygın bir hastalıkla ilgili internet kaynaklarının kalitesi ve okunabilirliği araştırma konusu olarak önem kazanmaktadır. Bu çalışma, plantar fasciit hakkında ücretsiz olarak sunulan çevrimiçi sağlık bilgilerinin kalitesini ve okunabilirliğini nicel olarak değerlendirmeyi amaçladı.

Yöntem: "Plantar fasiit" terimini aramak için Google arama motoru kullanıldı ve ilk 200 web sitesi değerlendirildi. Web sitelerindeki bilgilerin kalitesi, Journal of the American Medical Association (JAMA) skoru ve İnternette Sağlık Kodu [Health on the Net Foundation Code of Conduct (HONcode)] ölçütleri kullanılarak değerlendirildi. Çevrimiçi içeriğin okunabilirliği iki farklı skor olan Flesch-Kincaid (FK) sınıflandırma seviyesi ve Simple Measure of Gobbledygook (SMOG) kullanılarak değerlendirildi.

Bulgular: Toplam 162 web sitesi değerlendirildi. Web sitelerinin FK ve SMOG skorları sırasıyla 7.06±1.8 ve 6.65±1.4 olarak belirlendi. JAMA Skorları ise 2.21±1.2 olarak bulundu. Web sitelerinin sadece 27'sinde (%16.7) HON code bulunurken, 135'inde (%83.3) HON code bulunmadığı belirlendi. Ticari ve profesyonel web sitelerinin en düşük güvenilirliğe sahip kaynak olduğu bulundu.

Sonuç: Plantar fasciit ile ilgili çevrimiçi bilgiler çelişkili ve düşük kalitedir. Yüksek kalite düzeyindeki içeriğin sağlık portallarında bulunabileceğini düşünüyoruz. Hastalar ticari web sitelerinden plantar fasiit hakkında bilgi okurken dikkatli olmalıdır.

Anahtar Kelimeler: Plantar Fasciit, Bireysel Sağlık, Web Kullanımı

INTRODUCTION

Patients of all ages often refer to the internet for their symptoms, diagnosed diseases, treatment options and physician options [1–3]. Indeed, 74% of US adults answered the following question as "internet": The most recent time you looked for information about health or medical topics, where did you go first? [4]. The internet is such an important source of health information that about 4.5% of all searches on the internet are health-related [5]. However, there are serious concerns regarding the quality of online health material. Many studies on the quality of online content regarding health showed that the freely available information had suboptimal quality [6–8].

Plantar fasciitis also referred to as plantar fasciopathy, is a relatively common disorder with an incidence of 3.8% [9]. The incidence of plantar fasciitis is around 15% in foot-ankle-related physician visits [10]. The most prominent symptom is inferior heel pain, which is worse in the first few steps of the day, called the "start-up pain". There are multiple treatment options including rest, stretching and exercise therapy, non-steroidal anti-inflammatory drugs, steroid injections, extracorporeal shock wave therapy, prolotherapy, platelet-rich plasma injections, or even surgery in rare cases [11]. Treatment of plantar fasciitis is usually not quick and not all patients are symptom-free after three months of treatment [12].

Recently a study about the quality of online content about plantar fasciitis was published. They searched the "plantar fasciitis" term within 5 different search engines but evaluated only the first 25 websites in 2018. They found moderate quality and highly variable information about plantar fasciitis from retrieved 83 websites [13].

Makale Bilgisi/Article Info

Yükleme tarihi/Submitted: 16.08.2023, **Revizyon isteği/Revision requested:** 19.08.2023, **Son düzenleme tarihi/Last revision received:** 22.08.2023, **Kabul/Accepted:** 22.08.2023

***Sorumlu yazar/Corresponding author:** Hasan Kalyoncu University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Gaziantep, Turkey

[1*]Email: gunseli.usgu@hku.edu.tr, [2]Email: eoguz.sari@hku.edu.tr

However, Google is widely used globally, and it is the first search engine preferred by more than three-quarters of internet users. Considering how widespread the use of the internet Google for health purposes is, the quality and readability of internet resources about plantar fasciitis, a common disease with many treatment options for patients to choose from, gains importance as a research topic. Consequently, this study aims to evaluate the quality and the readability of the freely available online health information on plantar fasciitis quantitatively in the Google search engine.

METHOD

Website Selection

Google search engine was used in this study as it is by far the most widely used engine globally [14]. The term "plantar fasciitis" was searched on March 10, 2021. Before the search the following measures have been taken to prevent personalized results from being displayed: Incognito mode was preferred, search history and cookies were cleared, and location settings were disabled. The first 200 websites retrieved from the Google search were noted. This number exceeds the number of websites analyzed in many similar articles [15,16]. Websites that require subscription to read the content were excluded. Duplicates and irrelevant pages were removed. Inclusion or exclusion was decided by all three authors.

Quality Assessment

The quality of the information on the websites was assessed using the Journal of the American Medical Association (JAMA) score and the Health On the Net Foundation Code of Conduct (HONcode) certification.

The JAMA score is a set of validated benchmark criteria that examines the quality of online content under four headings [17]: Authorship, Attribution, Currency and Disclosure. name of the author should be provided with appropriate affiliations (Authorship), the copyright details and references should be available (Attribution), the date should be written (Currency), and the conflict of interest, funding, sponsorship, and advertising should be disclosed (Disclosure). The content receives 1 point for each criterion, so the JAMA score ranges between 1-4. JAMA Scoring was made by all three authors together.

The HON is a non-profit, non-governmental organization that has been recognized by the United Nations Economic and Social Council since 1995. It was established to facilitate the global dissemination of high-quality health information [18]. It serves to assure the reliability and credibility of health-related online material. In this study, the HONcode database was searched to determine the presence/absence of a HONcode certificate.

Readability Assessment

The readability of the online content was evaluated by two separate scores: The Flesch-Kincaid (FK) grade level and the Simple Measure of Gobbledygook (SMOG). The Flesch-Kincaid Grade level score gives an estimate of the American school grade one would need to be to understand the content of the article. It is calculated as follows: 0.39 x (words/sentences) + 11.8 x (syllables/words) - 15.59 [19]. The SMOG formula provides an estimate of the years of education one would require to understand the content of an article [20]. SMOG is especially suggested for assessing the readability of health-related content [21]. The SMOG score is calculated according to the formula: 1.0430 x sqrt (30 x Words that contain three or more syllables / Sentences) + 3.1291 [22]. The two readability scores were calculated for websites using a free online readability tool (https://www.webfx.com/tools/read-able/).

Type of the Website

The type of the website was grouped into eight categories, similar to a previous study by Kocyigit et al. [22]:

-Commercial: Websites with the primary goal of selling a product,

-Government: Websites established by an official governmental body,

-Health Portal: Websites that provide content on health-related information,

-News: Websites of newspapers or magazines,

-Non-profit: Websites that have specifically stated that they are not for profit, and have purposes such as support and information sharing,

-Professional: Websites established by medical doctors, medical centers, hospitals, etc.,

-Scientific Publishing: Academic journals, books,

-Others: Websites that do not fit any of the abovementioned categories.

The type of the website was decided by all authors together.

Ethical Approval

No personal data was processed or analyzed for this study. Only publicly available online information was collected. Therefore, an ethics committee approval was not required.

Statistical Analysis

The distribution of the data was analyzed using the Kolmogorov-Smirnov Test. Continuous variables are then presented as mean ± standard deviation, also with 95% confidence intervals. Categorical variables are presented with percentages. Analysis of variance was performed for comparing the Flesch–Kincaid grade levels, Simple Measure of Gobbledygook levels, and JAMA Scores between websites from different typologies. For post-hoc analysis a Bonferroni test was performed. The alpha level was at 0.05. All analysis was performed with GraphPad Prism 8.4.2 for Mac (GraphPad Software, San Diego, CA, USA).

RESULTS

A total of 162 websites were included in the study after excluding 38 websites (duplicates, irrelevant pages and pages that require subscription) (Figure 1). Typologies of the 162 websites were as follows: Professional: n=84 (51.8%), Commercial n=17 (10.5%), Scientific n=14 (8.6%), Health Portal n=13 (8.0%), News n=10 (6.2%), Governmental n=10 (6.2%), Non-profit n=9 (5.5%), and others n=5 (3.1%).

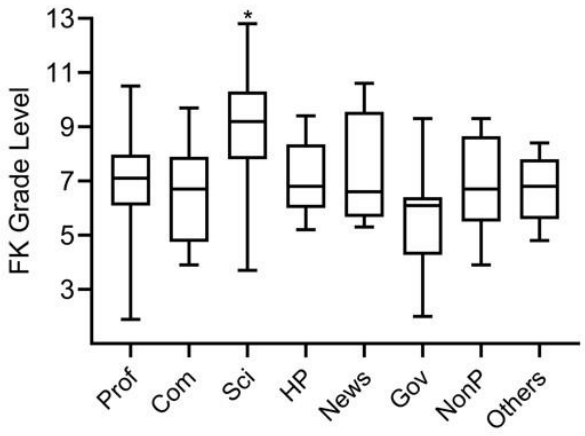

Figure 1. The flowchart showing the search process (FK Grade Level: Flesch-Kincaid Grade Level, Prof: Professional; Com: Commercial, Sci: Scientific Publishing, HP: Health Portal, Gov: Government, NonP: Non-profit.)

The mean Flesch–Kincaid grade level of all websites was 7.06±1.8, 95% CI [6.7798, 7.3402]. The mean Simple Measure of the Gobbledygook level of the websites was 6.65±1.4 95% CI [6.4321, 6.8679]. The mean JAMA Score of the 162 websites on plantar fasciitis was 2.21±1.2 95% CI [2.0232, 2.3968]. Only 27 (16.7%) of the websites had a HONcode, whereas 135 (83.3%) of them did not.

FK grade levels, SMOG levels, JAMA scores and HONcode presence of websites grouped by their typology are given in Table 1. Figures 2, 3 and 4 show the FK grade level, SMOG level and JAMA scores of websites from different categories, respectively.

Table 1. FK grade levels, SMOG levels, JAMA scores and HONcode presence of websites grouped by their typology. Data is presented as mean ±standard deviation, 95% confidence interval; or percentages

Variables	Flesch–Kincaid Grade Level	SMOG Level	JAMA Score	HONcode	
				Present	Absent
Professional (n=84)	7.05±1.5 95% CI [6.72,7.37]	6.58±1.2 95% CI [6.31, 6.84]	1.94±1.2 95% CI [1.68, 2.20]	9 (10.7%)	75 (89.3%)
Commercial (n=17)	6.54±1.75 95% CI [5.64, 7.43]	6.08±1.4 95% CI [5.36, 6.79]	1.47±0.91 95% CI [1.002, 1.93]	0 (0%)	17 (100%)
Scientific (n=14)*	8.98±2.1 95% CI [7.76, 10.19]	7.71±1.9 95% CI [6.61, 8.80]	2.92±0.8 95% CI [2.45, 3.38]	2 (14.3%)	12 (85.7%)
Health Portal (n=13)	7.07±1.3 95% CI [6.28, 7.85]	7.03±1.0 95% CI [6.42, 7.63]	3.53±0.8 95% CI [3.04, 4.01]	10 (76.9%)	3 (23.1%)
News (n=10)	7.42±2.0 95% CI [5.98, 8.85]	7.23±1.3 95% CI [6.3, 8.16]	2.9±1.0 95% CI [2.18, 3.61]	2 (20%)	8 (80%)
Governmental (n=10)	5.63±1.9 95% CI [4.27, 6.98]	6.07±1.3 95% CI [5.14, 7]	2.2±1.4 95% CI [1.99, 3.2]	3 (30%)	7 (70%)
Non-Profit (n=9)	6.73±1.7 95% CI [5.42, 8.03]	6.45±1.4 95% CI [5.37,7.52]	2.44±1.2 95% CI [1.51, 3.36]	1 (11.1%)	8 (88.9%)
Others (n=5)	6.72±1.2 95% CI [5.23, 8.21]	6.32±0.8 95% CI [5.32, 7.31]	2.6±1.0 95% CI [1.35, 3.84]	0 (0%)	5 (100%)
ANOVA results	F (7.154)= 4.440 p=0.0002	F(7.154)= 2.653 p=0.0128	F(7.154)= 5.888 p<0.0001	-	-
Bonferroni Post-hoc analysis **	Prof vs. Sci: p=0.002, Com vs. Sci: p=0.01, Sci vs. Gov: p<0.001, Sci vs. NP: p=0.032	Com vs. Sci: p=0.014	Prof vs. HP: p<0.001, Com vs. Sci: p=0.01, Com vs. HP: p<0.001, Com vs. News: p=0.033	-	-

**n=13 for FK score and SMOG score calculations because one outlier with over 20 points each was excluded. SMOG Level: Simple Measure of Gobbledygook Level, JAMA Score: Journal of the American Medical Association Score, HONcode: The Health on the Net Foundation Code of Conduct, Prof: Professional, Com: Commercial, Sci: Scientific Publishing, HP: Health Portal, Gov: Government, NonP: Non-profit.*

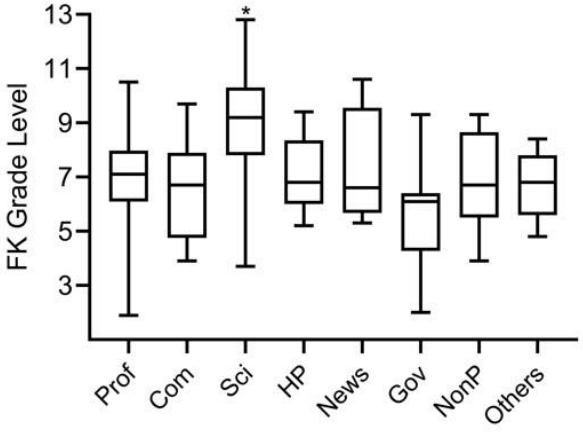

Figure 2. The FK grade levels of categorized websites (FK Grade Level: Flesch-Kincaid Grade Level, Prof: Professional; Com: Commercial, Sci: Scientific Publishing, HP: Health Portal, Gov: Government, NonP: Non-profit.)

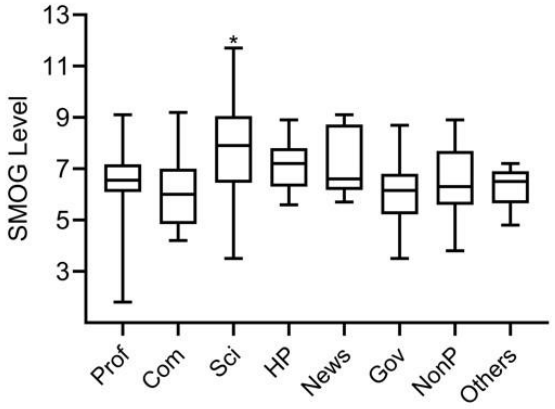

Figure 3. The SMOG grade levels of categorized websites (SMOG Level: Simple Measure of Gobbledygook Level, Prof: Professional; Com: Commercial, Sci: Scientific Publishing, HP: Health Portal, Gov: Government, NonP: Non-profit.)

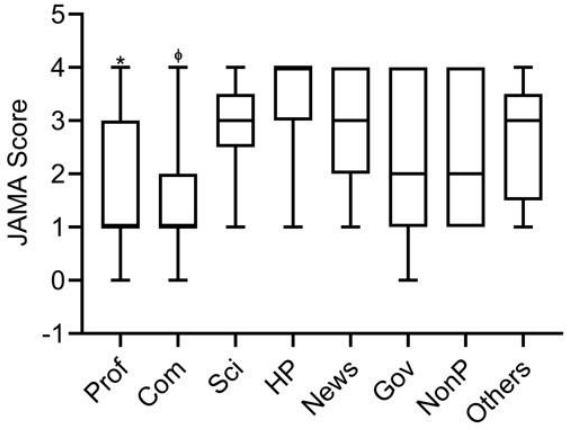

Figure 4. The JAMA scores of categorized websites (JAMA Score: Journal of the American Medical Association Score, Prof: Professional; Com: Commercial, Sci: Scientific Publishing, HP: Health Portal, Gov: Government, NonP: Non-profit.

Analysis of the First Ten Websites

The first ten websites that returned from the Google search for "plantar fasciitis" were further analyzed because of their high accessibility.

The typology distribution of the first ten websites were as follows: Professional (n=4, 40%), Governmental (n=2, %20), Health Portal (n=3, %30), Others (n=1, %10), (Table 2).

When the first ten websites are evaluated, the mean FK grade level was 6.78±1.1, 95% CI [5.9931, 7.5669], the mean SMOG level was 6.51±0.6, 95% CI [6.0808, 6.9392], and the mean JAMA Score was 3.4±0.8, 95% CI [2.828, 3.972]. HONcode was available on 60% of the websites (n=6).

Table 2. FK grade levels, SMOG levels, JAMA scores and HONcode presence of the first ten websites grouped by their typology. Data is presented as mean ±standard deviation, 95% confidence interval; or percentages

Variables	FK	SMOG	JAMA Score	HONCode	
				Present	Absent
Professional (n=4)	6.75±0.4 95% CI [6.11, 7.38]	6.37±0.2 95% CI [6.05, 6.68]	3.5±0.9 95% CI [2.06, 4.93]	2 (50%)	2 (50%)
Health Portal (n=3)	7.3±0.9 95% CI [5.06, 9.53]	6.97±0.5 95% CI [5.72, 8.21]	3.67±0.5 95% CI [2.42, 4.91]	3 (100%)	0 (0%)
Governmental (n=2)	5.25±0.65*	5.75±0.25*	2.5±0.5*	1 (50%)	1 (50%)
Others** (n=1)	8.4*	7.2*	4*	0 (0%)	1 (100%)

Confidence interval cannot be calculated for n=2 or n=1,Exact values are given for a single observation (n=1), FK: Flesch-Kincaid Grade Level, SMOG Level: Simple Measure of Gobbledygook Level, JAMA Score: Journal of the American Medical Association Score, HONcode: the Health On the Net Foundation Code of Conduct.*

DISCUSSION

Our study results revealed that the most common type of websites that shared information on plantar fasciitis was the professional websites, which were the ones written by medical doctors, physiotherapists, medical clinics, hospitals or universities. Also, of the first ten websites, four were professional. Although these websites are mostly managed by medical professionals, the quality of the content was low according to their JAMA score (1.94±1.2). Also, almost 90% of these pages did not have a HONcode. Low quality of websites written by physicians was reported by another study that evaluated the quality of online information about stem cell injections for knee osteoarthritis [23]. In contrast, some studies report higher quality content on professional websites [24,25]. The readability of the professional websites was mostly similar to the other groups; the only significant difference was that their FK grade level was lower than the scientific publications.

The second most common type of website that had information on plantar fasciitis was the commercial one. Commercial websites were easily read but had the lowest quality of all. They had the lowest JAMA scores (1.47±0.91) which were significantly lower than the scientific, news and health portal contents. Also, none of the commercial websites had a HONcode. According to these results, patients should be discouraged from reading health-related information from websites that aim to sell a product. This is particularly important while 10.5% of the available online material consisted of commercial ones. Other studies have also shown low quality and high readability scores of commercial websites, such as the study of Cisu et al. on hypospadias, or the study of Ghodasra et al. on platelet-rich plasma [26,27].

The highest-quality information was found in health portals. They had the highest JAMA scores (3.53±0.8) and the highest ratio of HONcode presence (76.9%). They were readable by 7th graders according to their FK grade levels and SMOG levels. In short, health portals provide high-quality health information on plantar fasciitis that is easily readable. However, there were only 13 health portals in the first 200, and 2 in the first 10. High-quality content was observed in the health portal by other researchers as well. Arif and Ghezzi reported that health portals had significantly higher JAMA scores than commercial or professional websites on breast cancer treatment options [28].

When the overall quality of the 162 websites is assessed, the mean score of 2.21 implies poor quality, and the absence of a HONcode certificate in 83.3% of websites supports this fact. A study on the quality of online material on ankylosing spondylitis showed that more than half of the content had poor quality [22]. Online information about the use of cannabidiol for arthritis and myofascial pain also had low quality [25,29]. Although the current online material scores low on quality measures, a historical study has shown that the quality of the online content on osteoarthritis has improved since 2003 [23].

We analyzed the first ten search results separately as they are the first websites to appear to the health information consumer. The first websites showed a higher percentage of HONcode presence and higher mean JAMA scores than the mean of all 162 websites analyzed. Also, the readability of the first ten websites was enough for 6th and 7th graders to comprehend. When the term plantar fasciitis is searched, the first ten results that appear before the reader are of high quality and easy to understand, which is a pleasing result.

Limitations

The internet is full of rapidly growing, ever-changing content that is hard to catch up with. This study was limited to websites that shared written content. However, Youtube.com is the second most visited website and the second largest search engine globally and more than 400 hours of video content is uploaded each minute [14,30]. For sure, it includes health information as well. Important limitations of this study were that it did not analyze the quality of the video content and it was limited to a single search engine.

CONCLUSION

In conclusion, freely available online information on plantar fasciitis is of poor quality in general but it is easy to read. The highest quality online content can be found on health portals. Patients should be careful when reading information about plantar fasciitis from commercial websites.

Ethical Approval: *This article does not contain any human or animal participants and evaluated websites that were available for everyone.*

Conflict of Interest: *The authors have no conflicts of interest to declare.*

Funding: *None.*

Acknowledgements: *None.*

Author Contribution: Concept: *GU;* ***Design:*** *GU;* ***Data collecting:*** *EOS;* ***Statistical analysis:*** *GU;* ***Literature review:*** *GU,EOS;* ***Writing:*** *GU,EOS;* ***Critical review:*** *GU.*

REFERENCES

1. Use of the Internet for Health Information https://www.cdc.gov/nchs/products/databriefs/db66.htm#ref1/Erişim Tarihi: 6 Ocak 2022.
2. Park E, Kwon M. Health-Related Internet Use by Children and Adolescents: Systematic Review. J Med Internet Res. 2018;20(4):e120.
3. Arcury TA, Sandberg JC, Melius KP, et al. Older adult internet use and eHealth literacy. J Appl Gerontol. 2020;39:141-50.
4. The most recent time you looked for information about health or medical topics, where did you go first? | HINTS n.d. https://hints.cancer.gov/view-questions-topics/question-details.aspx?PK_Cycle=11&qid=688/Erişim Tarihi: 6 Ocak 2022.
5. Morahan-Martin JM. How Internet Users Find, Evaluate, and Use Online Health Information: A Cross-Cultural Review. CyberPsychology & Behavior. 2004;7(5):497-510.

6. Daraz L, Morrow AS, Ponce OJ, et al. Can Patients Trust Online Health Information? A Meta-narrative Systematic Review Addressing the Quality of Health Information on the Internet. J Gen Intern Med. 2019;34:1884-1891.
7. Cuan-Baltazar JY, Muñoz-Perez MJ, Robledo-Vega C, Pérez-Zepeda MF, Soto-Vega E. Misinformation of COVID-19 on the Internet: Infodemiology Study. JMIR Public Health Surveill. 2020;6(2):e18444.
8. Kloosterboer A, Yannuzzi NA, Patel NA, Kuriyan AE, Sridhar J. Assessment of the Quality, Content, and Readability of Freely Available Online Information for Patients Regarding Diabetic Retinopathy. JAMA Ophthalmol. 2019;137:1240-1245.
9. Rasenberg N, Bierma-Zeinstra SMA, Bindels PJ, van der Lei J, van Middelkoop M. Incidence, prevalence, and management of plantar heel pain: a retrospective cohort study in Dutch primary care. Br J Gen Pract. 2019;69:801-808.
10. League AC. Current concepts review: Plantar fasciitis. Foot Ankle Int. 2008;29:358-366.
11. Cole C, Seto C, Gazewood J. Plantar Fasciitis: Evidence-Based Review of Diagnosis and Therapy- American Family Physician. Am Fam Physician. 2005;72:2237-2242.
12. Cinar E, Saxena S, Akkurt HE, Uygur F. Extracorporeal shockwave therapy in the management of plantar fasciitis: A randomized controlled trial. Foot (Edinb). 2020;44:101679.
13. Lim S-T, Kelly M, O'Neill S, D'Souza L. Assessing the Quality and Readability of Online Resources for Plantar Fasciitis. J Foot Ankle Surg. 2021;60:1175-1178.
14. Alexa - Top sites n.d. https://www.alexa.com/topsites/ Erişim Tarihi: 6 Ocak 2022.
15. O'Neill SC, Baker JF, Fitzgerald C, et al. Cauda equina syndrome: assessing the readability and quality of patient information on the Internet. Spine. 2014;39:645-649.
16. Lovett J, Gordon C, Patton S, Chen CX. Online information on dysmenorrhoea: An evaluation of readability, credibility, quality and usability. J Clin Nurs. 2019;28:3590-3598.
17. Silberg WM, Lundberg GD, Musacchio RA. Assessing, controlling, and assuring the quality of medical information on the Internet: Caveant lector et viewor—Let the reader and viewer beware. Jama. 1997;277:1244-1245.
18. HONcode n.d. https://www.hon.ch/HONcode/ Erişim Tarihi: 6 Ocak 2022.
19. Flesch R. A new readability yardstick. J Appl Psychol. 1948;32:221-233.
20. Mc Laughlin GH. SMOG grading-a new readability formula. J Read. 1969;12:639-646.
21. Meade CD, Smith CF. Readability formulas: cautions and criteria. Patient Educ Couns. 1991;17:153-158.
22. Kocyigit BF, Koca TT, Akaltun MS. Quality and readability of online information on ankylosing spondylitis. Clin Rheumatol. 2019;38:3269-3274.
23. Ng MK, Mont MA, Piuzzi NS. Analysis of Readability, Quality, and Content of Online Information Available for "Stem Cell" Injections for Knee Osteoarthritis. J Arthroplasty. 2020;35:647-651.
24. Al-Ak'hali MS, Fageeh HN, Halboub E, Alhajj MN, Ariffin Z. Quality and readability of web-based Arabic health information on periodontal disease. BMC Med Inform Decis Mak. 2021;21:1-8.
25. Bagcier F, Yurdakul OV, Temel MH. Quality and readability of online information on myofascial pain syndrome. J Bodyw Mov Ther. 2021;25:61-66.
26. Ghodasra JH, Wang D, Jayakar RG, et al. The Assessment of Quality, Accuracy, and Readability of Online Educational Resources for Platelet-Rich Plasma. Arthrosc J Arthrosc Relat Surg. 2018;34:272-278.
27. Cisu TI, Mingin GC, Baskin LS. An evaluation of the readability, quality, and accuracy of online health information regarding the treatment of hypospadias. J Pediatr Urol. 2019;15(40):1-6.
28. Arif N, Ghezzi P. Quality of online information on breast cancer treatment options. The Breast. 2018;37:6-12.
29. Premkumar A, Almeida BA, Lopez J, Pean CA, Nwachukwu BU, Sculco PK. The Quality of Online Resources Available to Patients Regarding Cannabidiol for Symptomatic Relief of Hip or Knee Arthritis is Poor. JAAOS Glob Res Rev. 2021;5:1-7.
30. Fascinating and Incredible YouTube Statistics | Brandwatch n.d. https://www.brandwatch.com/blog/youtube-stats/ Erişim Tarihi: 6 Ocak 2022.