Webometric Analysis of Ophthalmology Associations Websites in India

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Abstract

The purpose of this study is to evaluate the websites of Ophthalmologist associations in India using the Alexa Internet Website Traffic, Statistics and Analytics. The 40 ophthalmologist associations in India which have the web presence are included in the study. Each associations' website was searched in the Alexa Internet and data of Website Traffic, Statistics and Analytics is collected. The collected data is organized, tabulated and visualized using excel. The results of the analysis give interesting insights about the associations' websites. All India Ophthalmic Society (AIOS) is the most popular website and is in the first place among all the associations' website. It holds the global rank of 965269. Chandigarh Ophthalmologist website holds the highest bounce rate of 82.0. Odisa State ophthalmological society website holds the highest time on site 2.16.Chandigarh ophthalmological society website holds the highest links of 177

Keywords

Ophthalmology Associations in India, Webometric, Alexa Internet

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Introduction

Professional bodies (or professional associations) are organizations that consist of human capital engaged in a particular profession. The free dictionary (2016) defines professional body as "a body of persons engaged in the same profession, formed usually to control entry into the profession, maintain standards, and represent the profession in discussions with other bodies."
Like any other professional associations, the ophthalmologist associations promote the ophthalmic practice, research and human resource development through its manifold services. The ophthalmologist associations bring all together the ophthalmologists. The ophthalmologist associations in India play a crucial role to nurture the Indian ophthalmology field and hence the society.

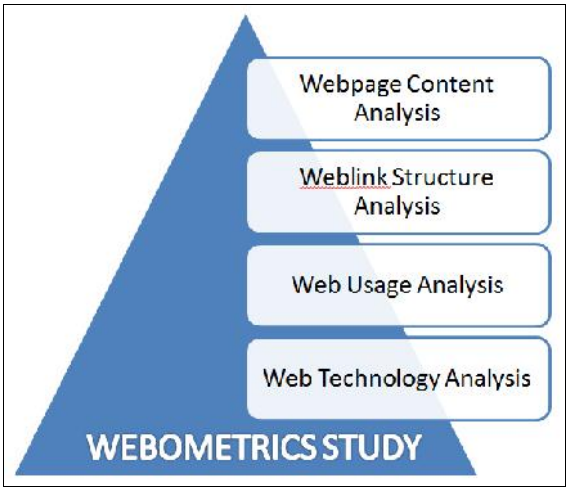
The ophthalmologist associations in India provide a number of benefits to its members. These benefits may include:

- Publish professional Journals
- Free access to certain set of journals
- Publish periodic newsletters for professional news updates and association happenings
- Conduct Conferences periodically
- Promote research and advancements in the professional field
- Provide a networking platform like "discussion forum" for knowledge exchange
- Provide resource centers, online learning resources and tools
- Provide careers support and opportunities for students and people already working
- Provide grants/fellowships for students
- Awards for experts in the field to honor and motivate them
- To defend the right of practice by prevent illegal encroachment over practice
- To promote social contact and improve fellowship amongst the members
- Other benefits like Insurance facilities

The websites of the ophthalmologist associations in India acts as a communication platform between the ophthalmologist association and the ophthalmologist. The website's value added services play a significant role in attaining these associations' purpose and existence. A webometric study is conducted to get a better understanding about the ophthalmologist associations' websites using Alexa Internet's web traffic statistics data.

Webometrics

The expansion in the use of the web for research has led to the evolution of Web Bibliometric, popularly referred to as Webometric. The term Webometrics was coined in 1997 by Tomas Almind and Peter Ingwersen in recognition that informetric analyses could be applied to the web. A Webometric analysis shows structure, content, features and nature of websites. It also shows the structure of web links to know the virtual highways and their interrelations.



- Analysis of webpage content is a kind of subject study based on the web site contents.
- Web link structure study means citation analysis that provides links to other webpages or websites. It is the study of hyperlinks of a particular website, patterns of linking like internal links, external links etc.
- Web usage analysis is part of a more general user and usage research.
- Web technology analysis refers to the information system assessment.

Important Web Terminologies

Internet - The Internet is a globally connected network system that uses TCP/IP to go transmit data via various types of medias

WWW - The World Wide Web (WWW) is a subset of internet which consists of websites that can be accessed using a web browser.

Website - The Websites is a collection of publicly accessible, interlinked web pages that share a single domain. A website is also known as a web presence.

Webpage - A Webpage is a document for the World Wide Web that is identified by a unique uniform resource locator (URL).

Web traffic - Web traffic is the amount of data sent and received by visitors to a website. Website traffic is simply the amount of people that comes to visit a website, the number of pages visitors click, and the amount of time a visitor views a page on a website.

Web Analytics - Web analytics is the measurement of the behavior of visitors to a website

Alexa Internet

Alexa Internet, Inc. is a california-based company that provides commercial web traffic data. It is a wholly owned subsidiary of Amazon.com. It was founded as an independent company in 1996 and later acquired by Amazon in 1999. Its toolbar collects data on browsing behavior of its users and transmits the data to the Alexa website, where the data are stored and analyzed, forming the basis for the company's web traffic reporting. According to its website (www.alexa.com), Alexa provides traffic data, global rankings and other information on 30 million websites, and as of 2015, its website has been visited by over 6.5 million people monthly.

Alexa Internet Website Traffic, Statistics and Analytics (Alexa 2016) measures the following attributes:

1. *Popularity (Global Rank, Indian Rank):* Alexa Internet (2016) Alexa's Traffic Ranks are based on the traffic data provided by the users in Alexa's global data panel over a rolling 3 month period. Traffic Ranks are updated daily. A site's ranking is based on a combined measure of Unique Visitors and Pageviews.
2. *Unique Visitors:* Unique Visitors are determined by the number of unique Alexa users who visit a site on a given day. It also shows up the geographical wise distribution of the visitors.
3. *Page views:* Pageviews are the total number of Alexa user's URL requests for a site. However, multiple requests for the same URL on the same day by the same user are counted as a single Pageview. The site with the highest combination of unique visitors and pageviews is ranked #1. Additionally, Alexa Internet employs data normalization to correct for biases that may occur in the data.
4. *Engagement (Daily Time on site, Bounce Rate):* Daily time on site is estimated regularly by Alexa Internet. Bounce Rate is the estimated

percentage of visits that consist of a single page view.

5. *Reputation:* Reputation includes a number of web sites connected to a certain website which shows it popularity
6. *Search Traffic:* Search traffic is the estimated percentage of visits that came from a search engine

Ophthalmologist Associations in India

India comprises of 29 states and 7 Union Territories. In India the ophthalmologist associations can be categorized as follows

- National Level associations
- Union Territory level associations
- Zone level associations
- State level associations
- City level associations

There exist 12 national level ophthalmologist associations, 3 union territory level associations, 2 zone level associations and 24 state level associations. There exists several city level associations but only very few have a web presence.

40 ophthalmologist associations in India have websites. All the 12 National level ophthalmologist associations have websites. Among the 7 union territory level ophthalmology associations, only 2 associations have websites. All the 4 zone level ophthalmology associations only 2 associations have websites. Among the 24 state level ophthalmology associations, only 17 associations have websites. In Google, 7 city level ophthalmology associations is indexed. The following Table 1 lists all the websites of the ophthalmology associations in India.

Review of Literature

The web has had a major impact on society (Lesk, 1997; Lynch, 1997) and the user population of the web is enormous and extremely diverse. The web evaluation gives more insights about the connectivity between the websites and common human. Hanief Bhat, M. (2013) evaluated the Indian Newspaper websites using Alexa Internet. The newspaper list included in the study is compiled by Audit Bureau of Circulations of top newspapers in India. The list includes 28 newspapers in various languages. Out of these 26 were available online. The results of this study show that "Dainik Bhaskar" has the highest traffic rank. "Punjab Kesari" has the highest number of average pages viewed per day and estimated daily time spent on site by the visitors. The fastest downloading speed is for "Economic Times". "Hindustan Times" has the highest number of links. "Decan Herald" has the highest reach amongst the global internet users, whereas "Udayavani" has the lowest bounce percentage. The highest percentage of visits that came from search engines is for "Dainik Jagran". The highest number of foreign users is for "Ananda Bazar Patrika". Most of the foreign users to Indian newspapers come from the USA. Besides administrators of Indian newspapers, the results of this study will be useful for web site managers in any field including those in charge of library web sites. The study will also help librarians and anyone interested to increase usage of a web site by analyzing the use of web site. Naheem K.T. (2016) examined the 13 Malayalam Newspaper websites. Results of the study shows that, most of the Malayalam newspaper websites do not act successfully on the web and need much attention. Similarly, some high traffic ranking newspaper showed weak performance in some of the attributes whereas some low traffic ranking newspapers performed comparatively better in some of the attributes. The downloading speed and bounce rate of most of the newspapers are not satisfactory, which needs to be given due attention as it could increase the number of visitors for the respective newspapers and their consequent global reach.

Actually the researcher couldn't able to find any study related to webometric analysis of ophthalmology associations' websites. This inspired to do this study "Webometric Analysis of Ophthalmology Associations Websites in India".

Objective of the study

- To investigate the ophthalmology associations' websites with each of the attributes of Alexa Internet Website Traffic, Statistics and Analytics
- To analyze all the ophthalmology associations' websites with all the attributes of Alexa Internet Website Traffic, Statistics and Analytics

Methodology

This study used All India Ophthalmological Website (AIOS) and Google search engine for collecting websites of ophthalmologist associations in India. From the AIOS website, its affiliated society lists was retrieved. In Google, "India ophthalmologist association or India ophthalmologist society or India ophthalmic association or India ophthalmic society" is the search term used to find out the ophthalmologist associations. Also each state in India

is added with the search term "ophthalmologist association or ophthalmologist society or ophthalmic association or ophthalmic society" to find out ophthalmologist associations. The websites of ophthalmology associations in India was collected during the period 12th to 19th December 2016. Using the Alexa Internet Website Traffic, Statistics, and Analytics, each website of the ophthalmology association is measured on 20th December 2016. Ms-Excel was used to organize, tabulate and visualize the collected data.

Scope of the study

Ophthalmologist association which has the web presence through its own websites and indexed in Google is included in the study. Google indexes the websites periodically and also the index is keep changing on a continuous basis. This study is based on the websites indexed by Google during the data collection period.

Table 1: Websites of Ophthalmology Associations in India

Sno.	Category	Ophthalmology Association	Website
1	National	All India Ophthalmic society (AIOS)	http://www.aios.org
2	National	Womens ophthalmologist association	http://www.wosindia.org
3	National	Glaucoma Society of India	http://www.glaucomaindia.com
4	National	Cornea Society of India	http://www.corneasocietyindia.org
5	National	Intraocular Implant & Refractive Society	http://www.iirsidelhi.com/
6	National	Ocular Trauma Society Of India	http://otsi.in
7	National	Oculoplastics Association Of India	http://www.opai.in
8	National	Strabismus&Pediatric Ophthalmol. Society	http://www.sposiindia.org
9	National	Uveitis Society of India	http://www.indianuveitis.org
10	National	Vitreo Retina Society	http://vrsi.in
11	National	Association of Community Ophthalmologists	www.acoinsite.org
12	National	Indian railway Ophthalmic Physician Association	http://iropamail.wixsite.com/iropazone
13	Union Territory	Chandigarh Ophthalmological Society	http://www.indmedica.com/cos/index.htm
14	Union Territory	Delhi Ophthalmological Society	http://www.dosonline.org
15	Zone Level	Eastern India Zonal Ophthalmology Congress	http://eizoc.org
16	Zone Level	North Zone Ophthalmological Society	http://nzos-online.com
17	State	Andhra Pradesh Ophthalmic Society (APOS)	http://apos.co.in
18	State	Assam Ophthalmic Society (OSA)	http://www.osa.ind.in
19	State	Bihar Ophthalmology Society	http://www.biharophthalmologicalsociety.in
20	State	Chatisgarh State Ophthalmological Society	http://www.csos.in
21	State	Jharkand Ophthalmologist Society (JHOS)	http://jhos.org.in
22	State	Karnataka Ophthalmic Society (KOS)	http://kos.drgiri.org
23	State	Kerala State Ophthalmic Society (KSOS)	http://www.ksos.in
24	State	Madya pradesh Ophthalmic Society	http://mpsos.org
25	State	Maharastra Ophthalmological Society	http://www.moseye.org
26	State	Odisa State Ophthalmological Society	http://osos.co.in
27	State	Punjab Ophthalmological Society	http://posonline.in
28	State	Rajasthan Ophthalmic Society	http://www.rostimes.com
29	State	Tamilnadu Ophthalmic Association (TNOA)	http://tnoa.info
30	State	Telungana Ophthalmological Society	http://www.tsos.co.in
31	State	U.P State Ophthalmology Society	http://www.upsosonline.org
32	State	Uttarakhand State Ophthalmological	http://www.uksos.org

		Society	
33	State	Ophthalmic Society of West Bengal (OSWB)	http://www.oswb.ebluesoft.com/
34	City	Indore Divisional Ophthalmologist society	http://theidos.com
35	City	Bombay Ophthalmic Soociety (BOA)	http://www.boamumbai.com
36	City	Jharkand Ophthalmological society, Ranchi (JOS)	http://ophthalmologistsociety.in/
37	City	Ahamadabad Ophthalmology Society	http://www.ahmedabadophthalmicsociety.com
38	City	Baroda Ophtalmic society	http://bos.org.in/
39	City	Poona Ophthalmological Society	http://poseye.org
40	City	Vidharba Ophthamic Society	http://voseye.org/

Analysis and Findings

Ophthalmologist Associations' websites & each attribute of Alexa Internet Website Traffic, Statistics, and Analytics

Attribute 1: :Popularity (Global Rank, Indian Rank): Alexa Internet global rank is available only for the 35 ophthalmologist associations. Alexa Internet global rank reveals that the website of All India Ophthalmic Society (AIOS) is the most popular site and is in the first place among all the 35 associations. The Chandigarh Ophthalmological society holds the second place and Baroda ophthalmic society holds the third place. The following Chart 1 shows up the Global Rank of all the associations' website.

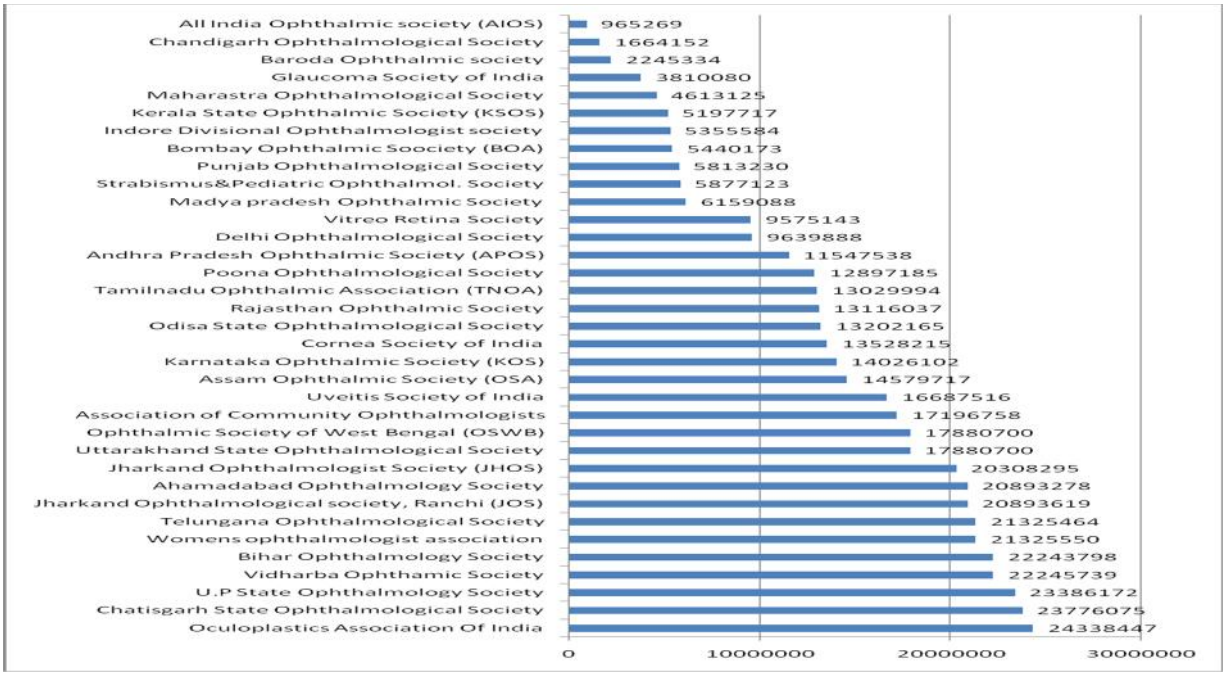


Chart 1: *Ophthalmologist Associations' Websites Global Rank*

As far as concerned to the Indian Rank, only 4 websites have the Indian rank among the 40 websites. They are: All India Ophthalmic society (AIOS) (Indian Rank:93,479), Glaucoma Society of India (Indian Rank:208,613), Chandigarh Ophthalmological Society (Indian Rank:198,354), Kerala State Ophthalmic Society (KSOS) (Indian Rank:285,688).

Alexa Intenet's geographical distribution analysis reveals that the following websites have the percentage of Indian visitors as shown within the brackets: All India Ophthalmic society (85.90%), Glaucoma society of India (100%), Chandigarh Ophthalmological Society (36.30%), Kerala State Ophthalmic Society (62.80%)

Attribute 2: :Engagement (Daily Time on site, Bounce Rate): Alexa Engagement analysis reveals that only 16 associations' website satisfy the engagement criteria. The following Chart 2 shows up the Bounce Rate of the associations' website. Only 5 websites have a good bounce rate whereas other website's traffic statistics is very minimal to calculate the bounce rate. Among the five, Chandigarh ophthalmologist website holds the highest bounce rate.

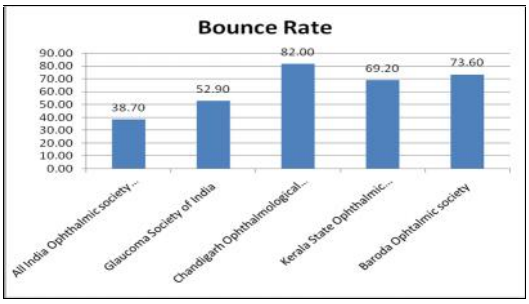


Chart 2: *Ophthalmologist Associations' Websites Bounce Rate*

The following Chart 3 shows up the Time on Site of the associations' website. Only 16 websites have a good "Time on site" whereas other website's traffic statistics is very minimal to calculate the Time on site. Among the 16 websites Odisa State Ophthalmological Society's website holds the highest "Time on site".

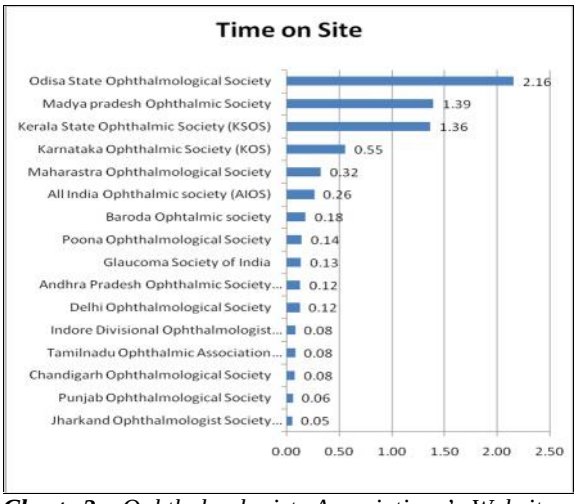


Chart 3: *Ophthalmologist Associations' Websites Time on Site*

Attribute 3:: Reputation attribute: The Reputation attribute which is based on number of web sites linked with the website reveals that 25 websites have a good number of links among the 40 association websites. It also reveals that the Chandigarh ophthalmological society holds the first place by having 177 links. All India Ophthalmologist association website holds the second place and Delhi Ophthalmological society holds the third place. The following Chart 4 shows up the no. of links of all the 25 associations' websites.

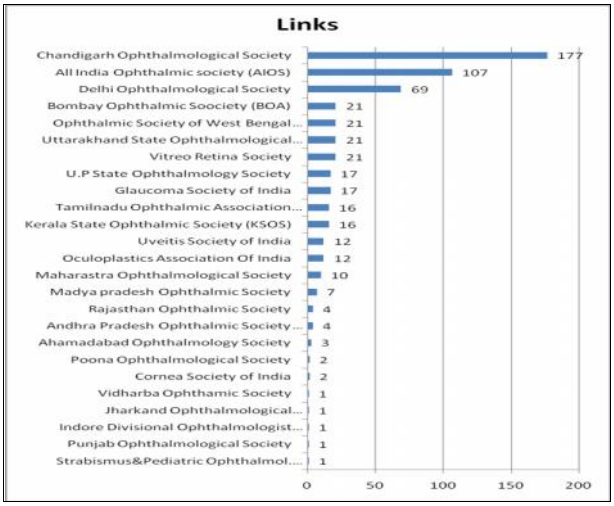


Chart 4: Ophthalmologist Associations' Websites Reputation attribute (Links)

Attribute 4:: Search Traffic: Search traffic which is the estimated percentage of visits that came from a search engine reveals that only 4 websites have good search traffic among the 40 websites. The Kerala state ophthalmic society holds the first place in search traffic.

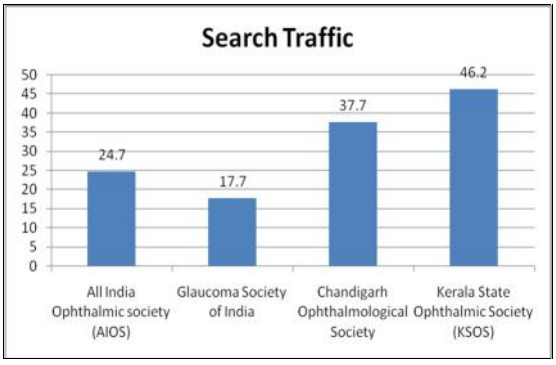


Chart 5: *Ophthalmologist Associations' Search Traffic*

Ophthalmologist Associations' websites & All the attributes of Alexa Internet Website Traffic, Statistics, and Analytics

Among the 40 ophthalmologist associations' websites only 3 websites have values for all the attributes of Alexa Internet Traffic Analytics. The following Table 2 shows up all the 3 associations' websites with its attribute values and ranks. The rank for each website is calculated based on the values of the attributes. All India Ophthalmic society is a national level association. Chandigarh ophthalmological society is a territory level association. Kerala State ophthalmic society is a state level association. Chandigarh ophthalmological society holds the first rank in Engagement attribute (Bounce Rate, Time on Site) and Reputation attribute (links). It also holds the second rank in Popularity attribute (Global rank) and Search traffic. The All India ophthalmic society holds the first rank in Popularity attribute (Global rank). It also holds the second rank in one of Engagement attribute (Time on Site) and Reputation attribute (links). The Kerala State ophthalmic society holds the first rank in Search traffic. It also holds second rank in one of the Engagement attributes (Bounce Rate) and third rank in the attributes Popularity attribute (Global rank), Reputation attribute (Links).

Table 2: Websites of Ophthalmology Associations in India & All the attributes

Website of Association	Global Rank		Bounce Rate		Time on Site		Links		Search Traffic	
	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank
All India Ophthalmic society (AIOS)	965,269	1	38.7	3	3:36	2	107	2	24.7	3
Chandigarh Ophthalmological Society	1,664,152	2	82	1	11:45	1	177	1	37.7	2
Kerala State Ophthalmic Society (KSOS)	5,197,717	3	69.2	2	1.36	3	16	3	46.2	1

Conclusion

A total of 40 ophthalmology associations in India have a web presence through their websites. All the 40 websites are indexed by the popular search engine Google. All India Ophthalmic Society (AIOS) is the most popular website and is in the first place among all the associations' website. It holds the global rank of 965269. Chandigarh Ophthalmologist website holds the highest bounce rate of 82.0. Odisa State ophthalmological society website holds the highest time on site 2.16.Chandigarh ophthalmological society website holds the highest links of 177. The Kerala state ophthalmic society website holds the highest traffic of 46.2. Among the 40 ophthalmologist associations' websites only 3 websites have values for all the attributes of Alexa Internet Traffic Analytics. They are the websites of All India Ophthalmic society (AIOS), Chandigarh Ophthalmological Society and Kerala State Ophthalmic Society (KSOS). The study results may also help the ophthalmology associations to strengthen their websites. This will improve the connection between the ophthalmologist associations and the ophthalmologist. The better service provided to the ophthalmologists and hence better service to the society.

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Annexure:

1.Alexa Internet Website Traffic, Statistics, and Analytics of the Websites of Ophthalmologist Associations in India

Sno.	Association	Traffic Rank		Pages viewed	Links	Bounce Rate	Time on site	Search	Users Percentage	
		India	Global						Indian	Foreign
1	All India Ophthalmic society (AIOS)	93,479	965,269	4.4	107	38.7	6:15	24.7	85.90%	
2	Womens ophthalmologist association		21,325,550	3.00						
3	Glaucoma Society of India	208,613	3,810,080	2.3	17	52.9	3:09	17.7	100	
4	Cornea Society of India		13,528,215	1.90	2					
5	Intraocular Implant & Refractive Society									
6	Ocular Trauma Society Of India									
7	Oculoplastics Association Of India		24,338,447	1	12					
8	Strabismus&Pediatric Ophthalmol. Society		5,877,123	2	1					
9	Uveitis Society of India		16,687,516	3	12					
10	Vitreo Retina Society		9,575,143	2	21					
11	Association of Community Ophthalmologists		17,196,758	2						
12	Indian railway Ophthalmic Physician Association									
13	Chandigarh Ophthalmological Society	198,354	1,664,152	1.2	177	82	1:49	37.7	36.30%	
14	Delhi Ophthalmological Society		9,639,888	3	69		2:54			
15	Eastern India Zonal Ophthalmology Congress									
16	North Zone Ophthalmological Society									
17	Andhra Pradesh Ophthalmic Society (APOS)		11,547,538	2.4	4		2:59			
18	Assam Ophthalmic Society (OSA)		14,579,717	1						
19	Bihar Ophthalmology Society		22,243,798	2						
20	Chatisgarh State Ophthalmological Society		23,776,075	1.00						
21	Jharkand Ophthalmologist Society (JHOS)		20,308,295	6			1:10			
22	Karnataka Ophthalmic Society (KOS)		14,026,102	12			13:18			
23	Kerala State Ophthalmic Society (KSOS)	285,688	5,197,717	2.2	16	69.2	1:36	46.2	62.80%	
24	Madya pradesh Ophthalmic Society		6,159,088	4	7		1:39			
25	Maharastra Ophthalmological Society		4,613,125	1.9	10		0:32			
26	Odisa State Ophthalmological Society		13,202,165	3			2:16			
27	Punjab Ophthalmological Society		5,813,230	1.3	1		1:23			
28	Rajasthan Ophthalmic Society		13,116,037	2	4					
29	Tamilnadu Ophthalmic Association (TNOA)		13,029,994	4	16		1:52			
30	Telungana Ophthalmological Society		21,325,464	3.00						
31	U.P State Ophthalmology Society		23,386,172	1	17					
32	Uttarakhand State Ophthalmological Society		17,880,700	2	21					
33	Ophthalmic Society of West Bengal (OSWB)		17,880,700	2	21					
34	Indore Divisional Ophthalmologist society		5,355,584	7	1		1:52			
35	Bombay Ophthalmic Soociety (BOA)		5,440,173	1	21					
36	Jharkand Ophthalmological society, Ranchi (JOS)		20,893,619	4	1					
37	Ahamadabad Ophthalmology Society		20,893,278	4.00	3					
38	Baroda Ophtalmic society		2,245,334	1.2		73.6	4:17			
39	Poona Ophthalmological Society		12,897,185	3.00	2		3:20			
40	Vidharba Ophthamic Society		22,245,739	2	1					