Study on Activity Analysis of Orthopedic Doctors on Digital Health Platforms, Pune

By

Purva Sharma

Dissertation submitted in partial fulfillment of the requirements of the degree

MBA Hospital and Health Management

Academic year, 2017-2019

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INSTITUTE OF HEALTH
MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

TO WHOMSOEVER MAY CONCERN

This is to certify that **Dr. Purva Sharma**, student of MBA Hospital and Health Management from The IIHMR University, Jaipur has undergone internship training at **Docplexus, Pune** from **4th Feb 2019** to **30th April 2019**.

The Candidate has successfully carried out the study designated to her during internship training and her approach to the study has been sincere, scientific and analytical.
The Internship is in fulfillment of the course requirements.

I wish her all success in all her future endeavors.

Dr. Ashok Kaushik
Dean, Academics and Student Affairs
The IIHMR University, Jaipur

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Date : 08/05/19

TO WHOM IT MAY CONCERN

This is to certify that Dr. Purva Sharma has done three months dissertation on "**A study on activity analysis of orthopaedic doctors on Digital Health Platforms"** at **Docplexus , Pune** from 04/02/2019 to 30/04/2019.

During this period of dissertation Dr. Purva Sharma has been found sincere and having attitude to learn.

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CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled "**A study on activity activity analysis of orthopaedic doctors on Digital health platforms"** and submitted by **Dr. Purva Sharma** Enrollment **No 633** under the supervision of **Dr. Monika Chaudhary** for award of MBA in Hospital and Health/ Pharmaceutical / Rural Management in Health and Hospitals of the University carried out during the period from **4th Feb 2019** to **3rd May 2019** embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other institute or other similar institution of higher learning.

Signature

Abstract

Title : A study on activity analysis of orthopedic doctors on Docplexus portal, pune.

Name of Author: Dr Purva Sharma

Background : Health professionals can increase their Efficiency, Quality with increased diagnosed accuracy by discussing different treatment cases with their peers on "e-Health" Highly functioning physicians are the backbone of an efficient healthcare system. E-Health may enhance the quality of health care by allowing comparisons between different providers with focus on quality assurance and access to a platform where direct discussion of patient cases with the best quality providers. Different E-Health platforms like SERMO, DOXIMITY, QuantiaMD, Docplexus provide opportunity to doctors to have an evidence based real time communication with peers to collectively solve tough cases and get help with diagnoses.

Objectives : To find out Orthopedic users association wise, experience wise and location wise involvement of Orthopedic healthcare professionals with Docplexus.

Material and Methods: This was an organization based observational study conducted in 100 orthopedic doctors from 4th Feb 2019 to 3rd May 2019 at Docplexus organization, pune. The data was collected through software used in the organization and analysis was done using MS Excel.

Result: In present study, Orthopedic users, Indian Orthopedic association were maximum in the organization. The activity level of OSSAP (The orthopedic Surgeons Society of Andhra Pradesh) association was observed to be maximum. In terms of age it was concluded that orthopaedic users above 35 years of age are actively involved while maximum orthopaedic users belong to 25-35 years age group. The orthopaedic users from South India are actively involved while from East India are minimally Involved.

Conclusion: a Strategy may be made to engage and involve from orthopedic users from Gujarat Orthopedic Association & OSSAP (The orthopedic Surgeons Society of Andhra Pradesh) having less than < 15 years of experience and to involve more users from East India.

ACKNOWLEDGEMENT

I would like to take this opportunity to acknowledge the people without whom the project would have not seen the light of the day. In our efforts towards the realization of the project work, I have drawn on the guidance of many people who facilitated in shaping and remodeling the project.
I got the opportunity to pursue my dissertation from Docplexus, Pune which is one of the best Healthcare IT company in India.

I would like to thank my Team Lead **Mr. Vinayak Sathe (Project Manager, Docplexus)**and **Dr Monika Chaudhary (Associate Professor, IIHMR University Jaipur)**to help me and giving me necessary advices and guidance.

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DISSERTATION

Project :- **A STUDY ON ACTIVITY ANALYSIS OF ORTHOPEDIC DOCTORS ON DOCPLEXUS PORTAL , PUNE.**

INTRODUCTION

e-Health majorly means the usage of Information and Communication Technology (ICT) in health.

Health professionals can increase their Efficiency, Quality with increased diagnosed accuracy by discussing different treatment cases with their peers on "e-Health"**.**

E-Health may enhance the quality of health care by allowing comparisons between different providers with focus on quality assurance and access to a platform where direct discussion of patient cases with the best quality providers.

Diagnostic accuracy increased by have real-time communication and evidence based[1] discussions with healthcare professionals.

Different organizations offering E-Health platforms to health care experts are mentioned below:-

SERMO (Approx. 80000 Users)

Targeted users:

Ecuador, Sweden , U.S., U.K., France, the Netherlands, Australia, South Africa , Italy, Denmark , Canada, Ireland, Peru Mexico, Spain, Finland, Argentina, Israel, Norway, Chile New Zealand, Colombia, Venezuela, Guatemala.

This platform is exclusively for doctors where they can have discussion on treatment cases to the practice of medicine without any fear of consequences from thousands of their colleague. [2]

Doximity (Approx. 500,000 Users)

Target users: All U.S. healthcare professionals

Doximity provides opportunity to doctors to connect with peers they already know on a HIPAA-secure platform.

Study has shown that Doximity has 70% of U.S. physicians on their platform.[3]

QuantiaMD (Approx. 200,000 Users)

Target users: U.S. physicians

Quora and Lynda.com combine to form evocative of QuantiaMD.[3]

The more healthcare professionals are engaged in these social networking portals more reduction in the disease burden of the world can happen due to enhance knowledge transfer and effective treatment.

LITERATURE REVIEW

A recent study conducted by CCO, claims that 50% of the US physician have accessed social media for professional purposes, in which 61% have used it to know about new CME opportunities.[4]

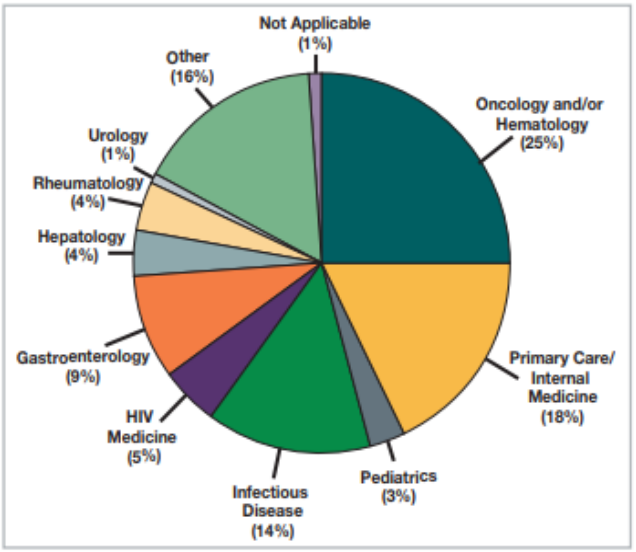


Fig. 1 Specialty-wise physician involvement with online healthcare portals

This survey suggests that Oncology & Hematology physicians are more involved and engaged with online healthcare portal for sharing of information, knowledge & discussing patient cases.

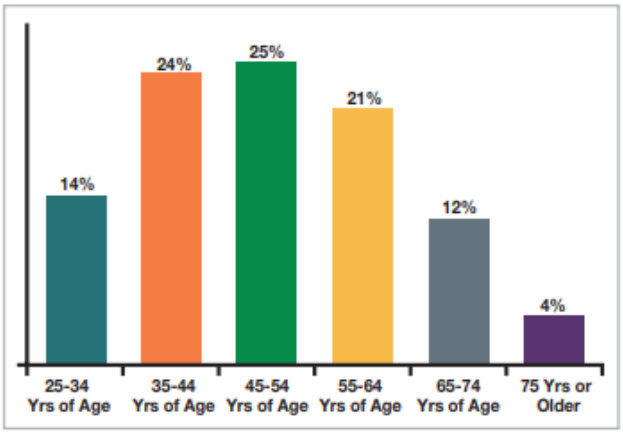


Fig. 2 Age-wise physician involvement with online healthcare portals This survey suggests that 45-54 years of US physicians are more involved and engaged with online healthcare portal for sharing of information, knowledge & discussing patient cases.

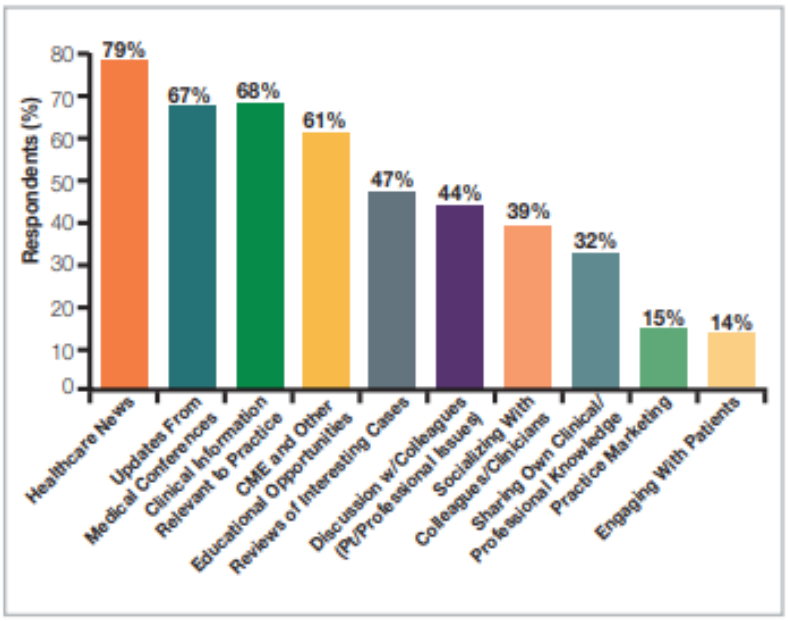


Fig. 3 Professional Benefits of Online Portal as suggested by US physicians

This survey suggests that US physicians are more involved and engaged with online healthcare portal for getting daily updates related to healthcare news.

According to US healthcare. dmagazine.com[5]

PHYSICIANS SN USAGE ESTIMATES (2012)

- Out of 4 US healthcare physicians uses each 1 uses social media for fetching out medical information news.
- About % of physicians are active on physician only websites.

AIMS & OBJECTIVE

Rationale:

With fast paced advancement in science and new technologies and increased pressure to deliver efficiently medicine pattern is changing. Docplexus helps healthcare physicians execute the Art of Modern Medicine efficiently and effectively by sharing of healthcare news & treatment cases globally.

The more healthcare professionals are engaged in these social networking portals more reduction in the disease burden of the world can happen due to enhance knowledge transfer and effective treatment.

The study was conducted to check the activity of orthopedic doctors at Docplexus portal.

Research Question:

Whether the orthopedic doctors are actively engaged with Docplexus?

Aim:

To improve the orthopedic healthcare professional engagement with Docplexus .

Research Objective: To find out

1. Orthopedic Association wise involvement of Orthopedic healthcare professionals with Docplexus.
2. Experience wise involvement of Orthopedic healthcare professionals with Docplexus.
3. Location wise involvement of Orthopedic healthcare professionals with Docplexus.

METHODOLOGY

Sample Size:- 100 Orthopedic Doctors

Sampling:- Purposive Sampling, Observational study

Study Period :- 3 months (4rd Feb 2019 to 3rd May 2019)

Study Sample :- Docplexus Users & Key Opinion Leaders

Data Type:- Primary data

Data Collection :- Through Data Collection software used in the Organization.

Data Analysis :- Analysis was done under MS Excel to assess the activity analysis of orthopedic doctors with docplexus.

ANALYSIS

Table No.1 Association wise Orthopedic Users in Percentage

Ortho Associations	No. of Users (%)
Asia Pacific Orthoplastic Society	4.4
Bombay Orthopedic Society	4.4
Delhi Orthopedic Society	6.7
Gujarat Orthopedic Association	2.2
Indian Foot & Ankle Society	6.7
Indian Society of Hip & Knee Surgeons	4.4
Indian Orthopedic Associations	35.6
Jharkhand Orthopedic Association	6.7
Karnataka Orthopedic Association	4.4
Madhya Pradesh Orthopedic Association	4.4
Maharashtra Orthopedic Association	2.2
Pediatric Orthopedic Society of India	4.4
Rajasthan Orthopedic Association	11.1
(OSSAP)	2.2

Figure no. 4 Association wise Orthopedic Users in Percentage

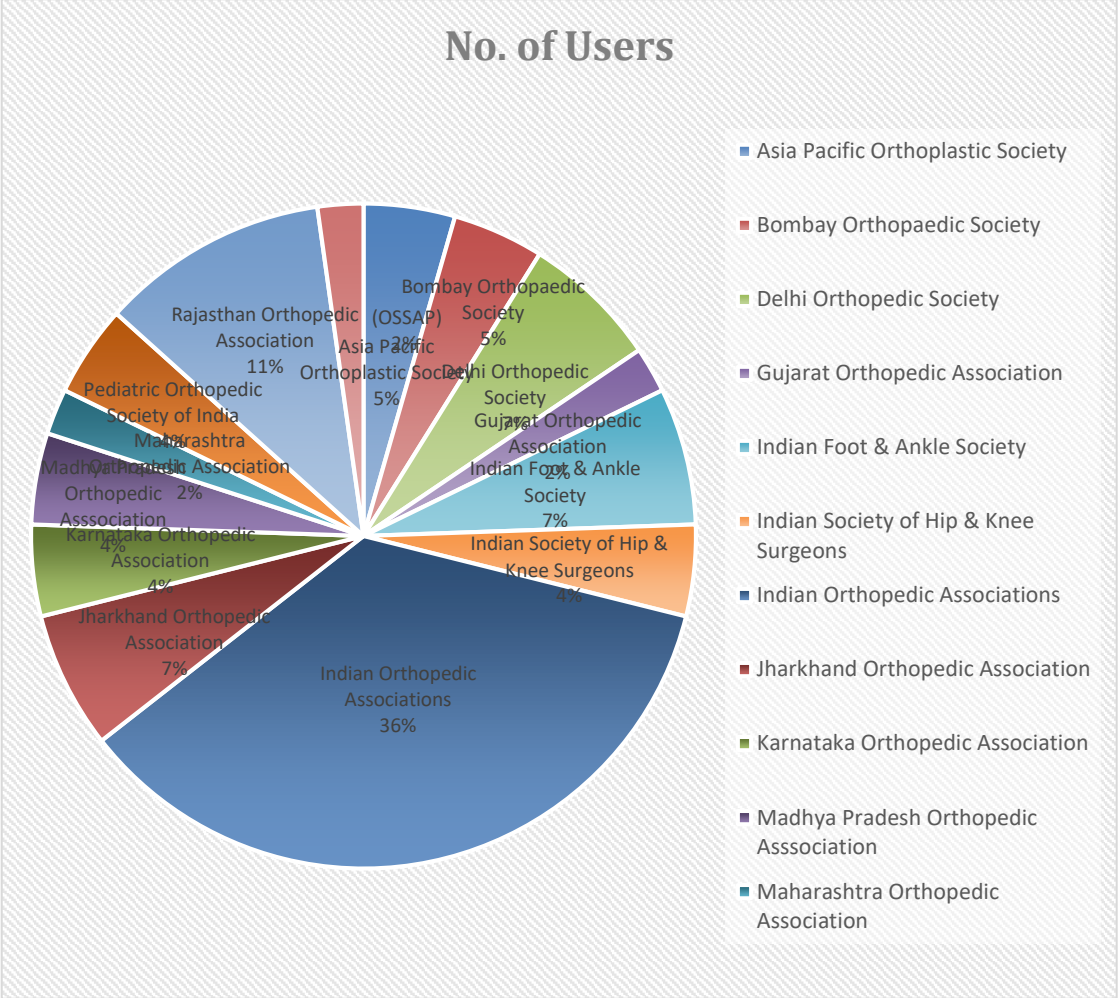


Table no. 2 Association wise Average likes of Orthopedic Users

Association Name	Average Like
Gujarat Orthopedic Association	7
The orthopedic Surgeons Society of Andhra Pradesh (OSSAP)	4
Karnataka Orthopedic Association	2
Rajasthan Orthopedic Association	2
Bombay Orthopedic Society	1
Delhi Orthopedic Society	1
Indian Orthopedic Associations	1
Pediatric Orthopedic Society of India	1
Asia Pacific Orthoplastic Society	0
Indian Foot & Ankle Society	0
Indian Society of Hip & Knee Surgeons	0
Jharkhand Orthopedic Association	0
Madhya Pradesh Orthopedic Association	0
Maharashtra Orthopedic Association	0

Figure no. 5Association wise Average likes of Orthopedic Users

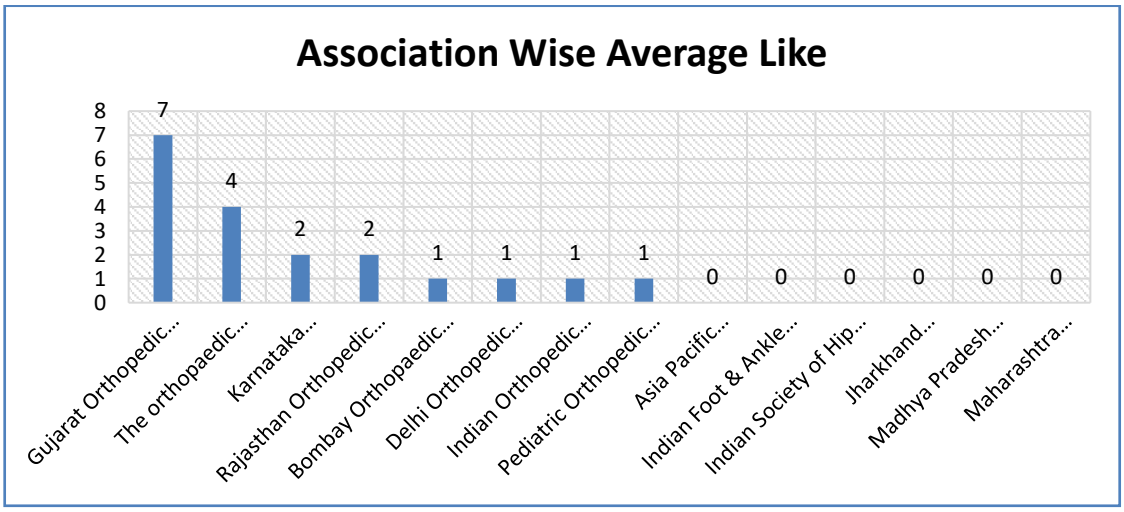


Table no. 3 Association wise Average Activity level of Orthopedic Users

Ortho Associations	Average Activity Level
The orthopedic Surgeons Society of Andhra Pradesh (OSSAP)	363
Karnataka Orthopedic Association	253.5
Gujarat Orthopedic Association	166
Delhi Orthopedic Society	158.67
Indian Society of Hip & Knee Surgeons	145
Rajasthan Orthopedic Association	106.5
Pediatric Orthopedic Society of India	53.5
Asia Pacific Orthoplastic Society	41.5
Indian Orthopedic Associations	35.125
Madhya Pradesh Orthopedic Association	35
Bombay Orthopedic Society	24.5
Indian Foot & Ankle Society	18

Jharkhand Orthopedic Association	7
Maharashtra Orthopedic Association	0

Figure no. 6 Association wise Average Activity level of Orthopedic Users

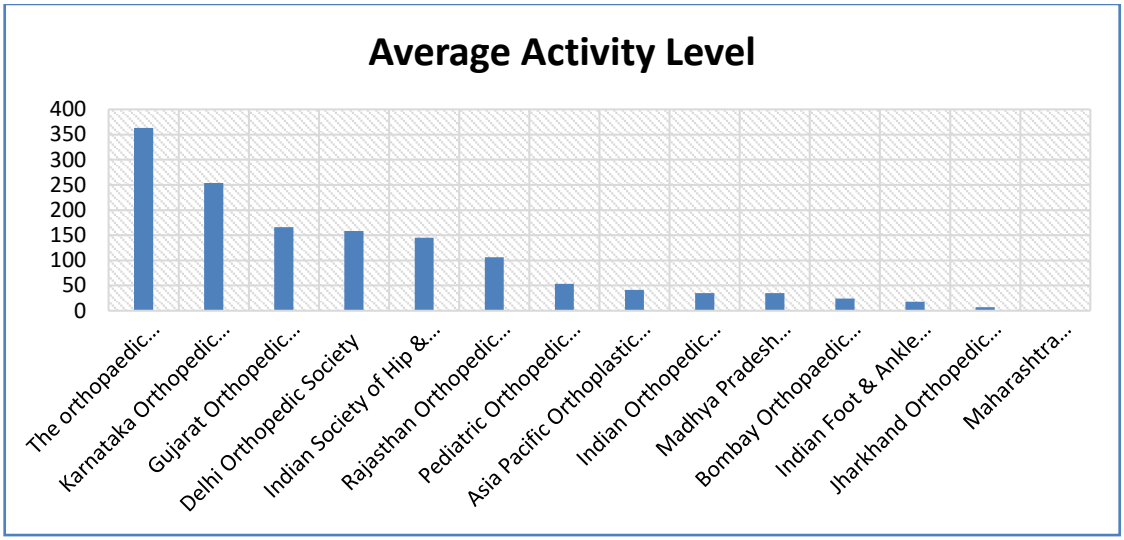


Table no. 4 Association wise Average Post of Orthopedic Users

Ortho Associations	Average Post
Indian Society of Hip & Knee Surgeons	1
Pediatric Orthopedic Society of India	1
Asia Pacific Orthoplastic Society	0
Bombay Orthopedic Society	0
Delhi Orthopedic Society	0
Gujarat Orthopedic Association	0
Indian Foot & Ankle Society	0
Indian Orthopedic Associations	0
Jharkhand Orthopedic Association	0
Karnataka Orthopedic Association	0
Madhya Pradesh Orthopedic Association	0
Maharashtra Orthopedic Association	0
Rajasthan Orthopedic Association	0
The orthopedic Surgeons Society of Andhra Pradesh (OSSAP)	0

Figure no. 7 Association wise Average Post of Orthopedic Users

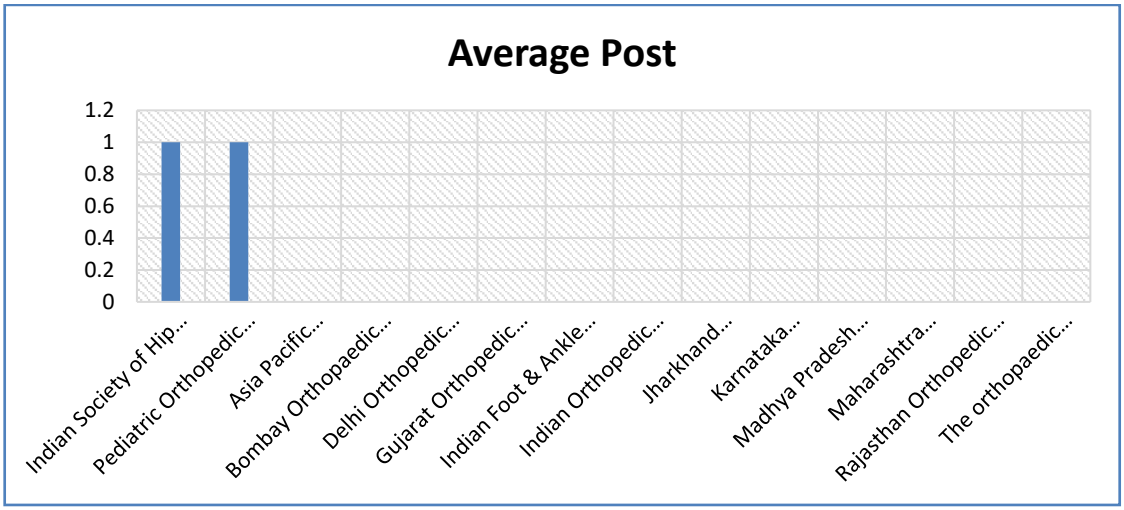


Table no. 5 Association wise Average Comment of Orthopedic Users

Ortho Associations	Average Comment
Indian Society of Hip & Knee Surgeons	10.5
Gujarat Orthopedic Association	7
The orthopedic Surgeons Society of Andhra Pradesh (OSSAP)	4
Rajasthan Orthopedic Association	3.6
Karnataka Orthopedic Association	2
Indian Orthopedic Associations	1.125
Delhi Orthopedic Society	0.33
Asia Pacific Orthoplastic Society	0
Bombay Orthopedic Society	0
Indian Foot & Ankle Society	0
Jharkhand Orthopedic Association	0
Madhya Pradesh Orthopedic Association	0
Maharashtra Orthopedic Association	0
Pediatric Orthopedic Society of India	0

Figure no. 8 Association wise Average Comment of Orthopedic Users

Experience	No. of Users	Average Activity Level	Average Like	Average Post	Average Comment
<=15 years	12%	15	0	0	1
15-25 years	33.30%	58	1	0	1
25-35 years	39.50%	76	1	1	2
>= 35 years	14.50%	133	2	0	5

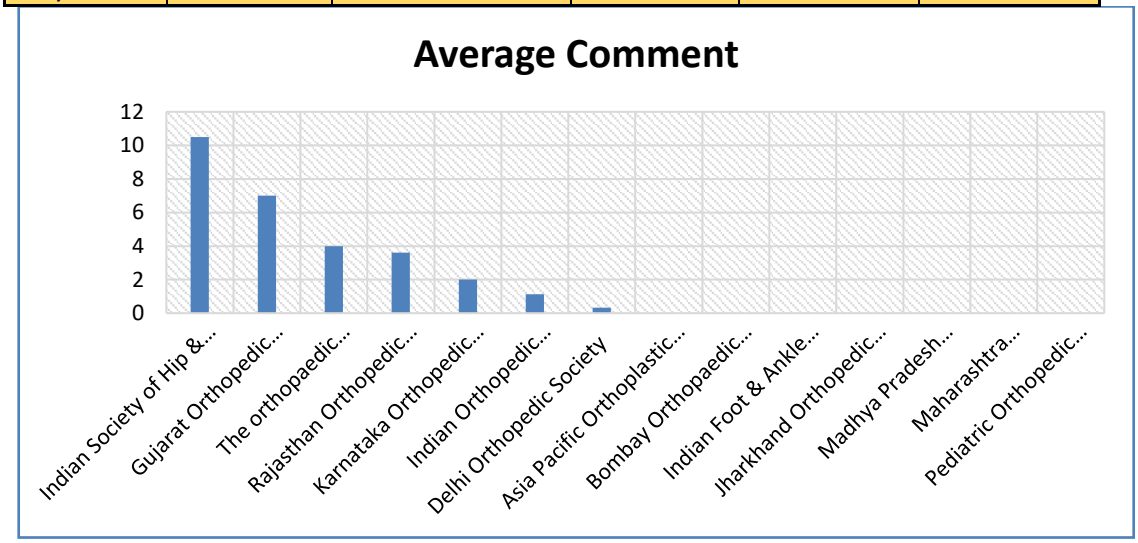


Table no. 6 Experience-wise, no. of Orthopedic Users with their activity analysis (Activity, Like, Post & Comment)

Figure no. 9 Experience-wise no. of Orthopedic Users on Docplexus

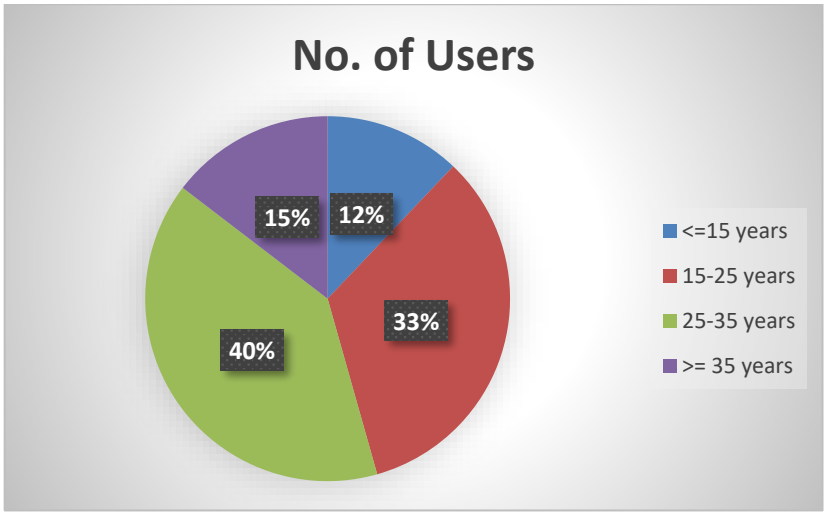


Figure no. 10 Experience-wise Activity of Orthopedic Users on Docplexus

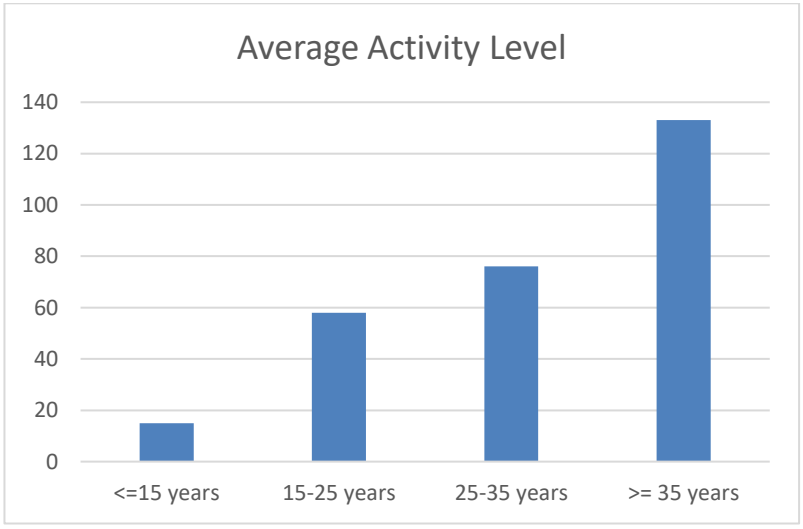


Figure no. 11 Experience-wise Likes of Orthopedic Users on Docplexus

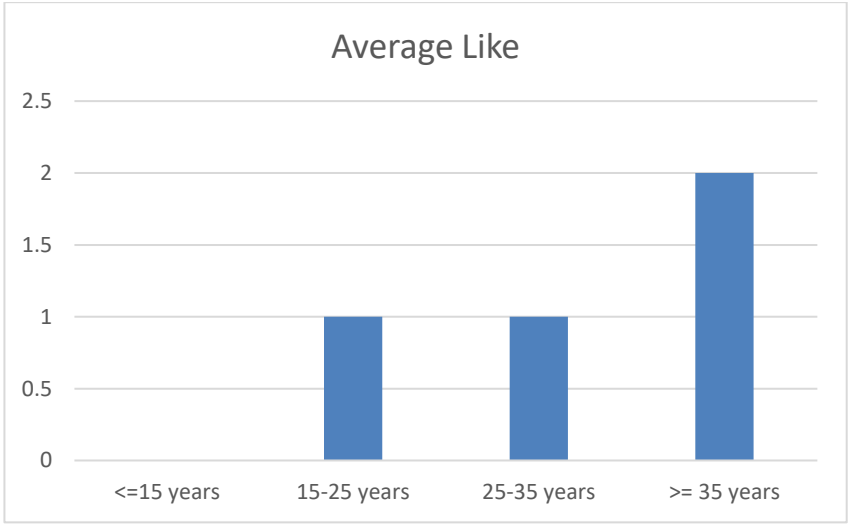


Figure no. 12 Experience-wise Post of Orthopedic Users on Docplexus

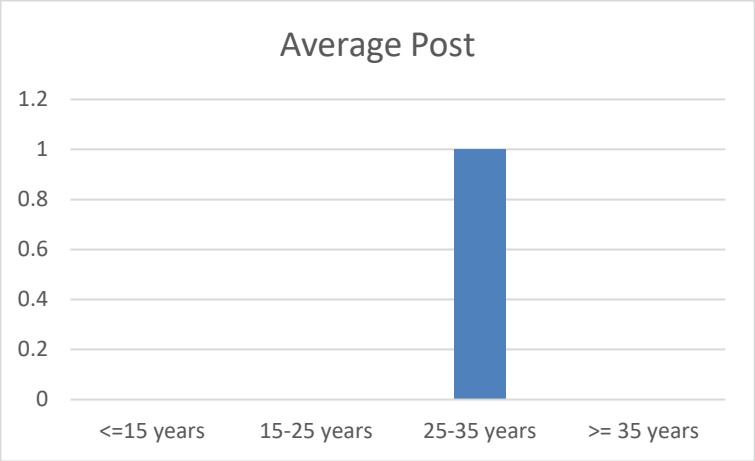


Figure no. 13 Experience-wise Comment of Orthopedic Users on Docplexus

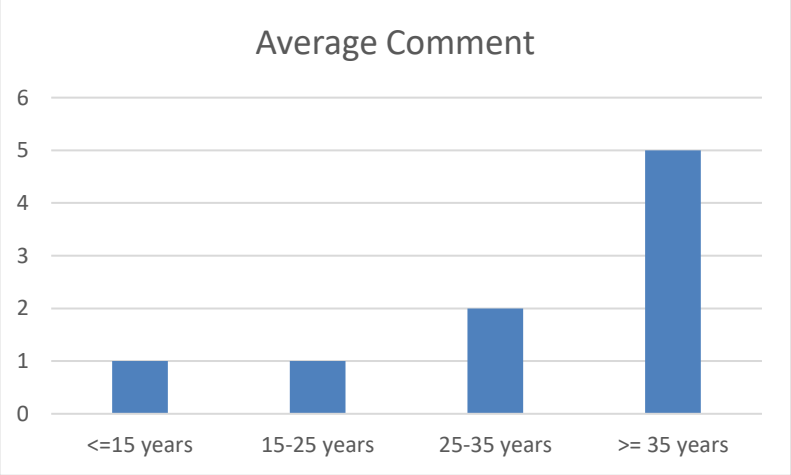


Table no. 7Location-wise, no. of Orthopedic Users with their activity analysis (Activity, Like, Post & Comment)

Location	No. of Users	Average Activity Level	Average Like	Average Post	Average Comment
North India	36.5	76	1	1	2
West India	29.2	80	1	1	4
South India	21.9	106	1	0	1
East India	12.1	6	0	0	0

Figure no. 14 Location-wise no. of Orthopedic Users on Docplexus

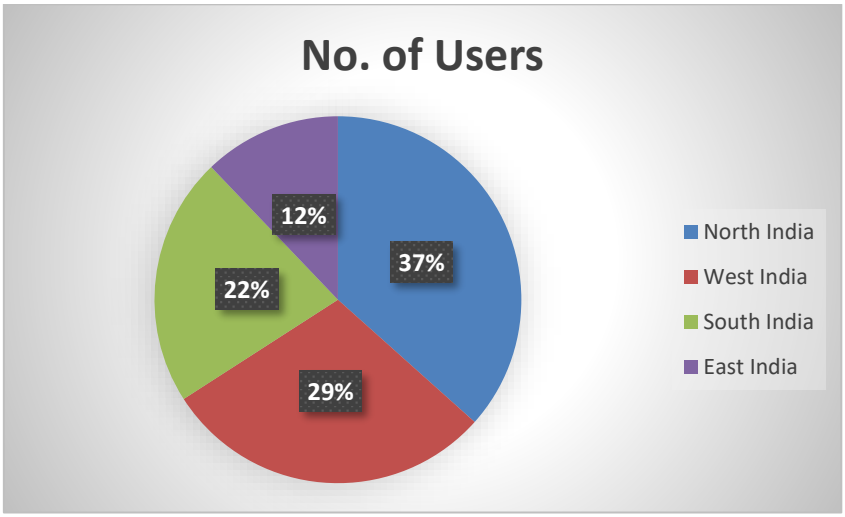


Figure no. 15 Location-wise Average Activity of Orthopedic Users on Docplexus

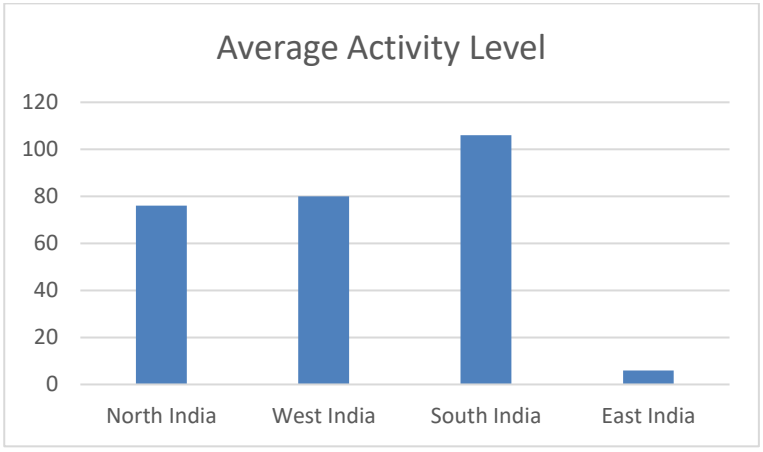


Figure no. 16 Location-wise Average Post of Orthopedic Users on Docplexus

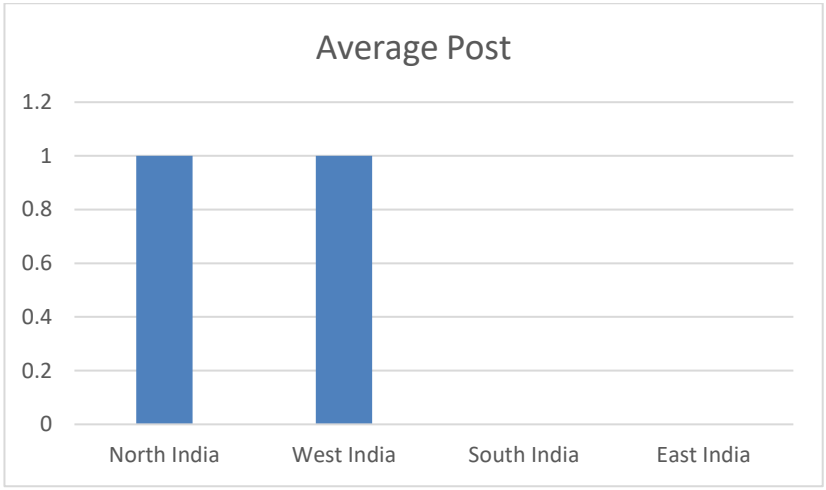


Figure no. 17 Location-wise Average Like of Orthopedic Users on Docplexus

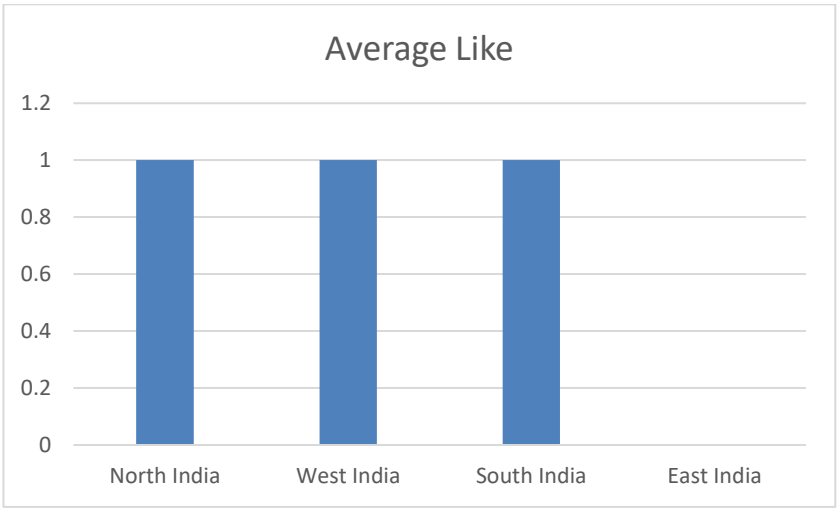
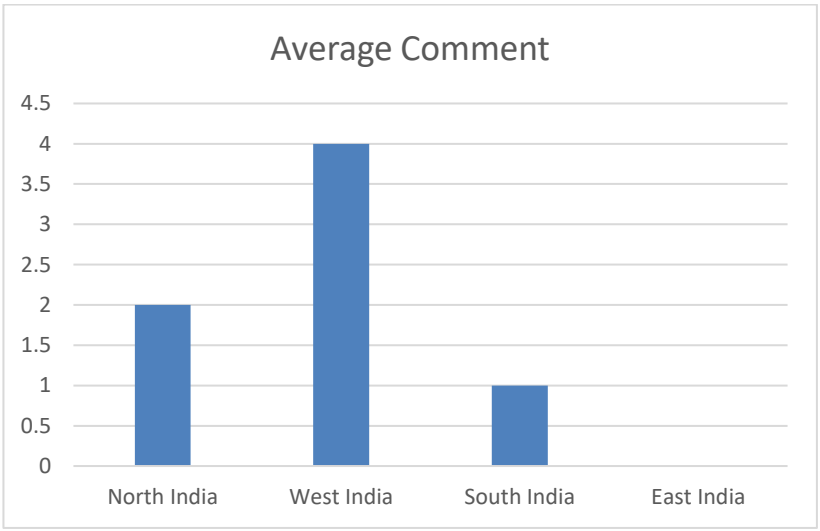


Figure no. 18 Location-wise Average Comment of Orthopedic Users on Docplexus



RESULTS & DISCUSSIONS

1. Orthopedic Users are maximum (36%) on Docplexus from Indian Orthopedic Associations while least (2.2%) from Gujarat Orthopedic Association &OSSAP (The orthopedic Surgeons Society of Andhra Pradesh).
2. Orthopedic Users from OSSAP (The orthopedic Surgeons Society of Andhra Pradesh) have maximum (363) "Activity level" on Docplexus while least from users of Maharashtra Orthopedic Association.
3. Orthopedic Users from Indian Society of Hip & Knee Surgeons&Pediatric Orthopedic Society of India"posts" maximum on Docplexus.
4. Orthopedic Users from Indian Society of Hip & Knee Surgeons"comments" maximum on Docplexus.
5. Orthopedic Users from Gujarat Orthopedic Association"likes" maximum on Docplexus.
6. Orthopedic Users are maximum (39.5%) on Docplexus from 25-35 years of Experience while least (12.%) from<= 15 years of experience.
7. Orthopedic Users having more than 35 years of age have maximum (133) "Activity level" on Docplexus while least from users having less than 15 years of experience.
8. Orthopedic Users from having age less than 15 years"likes" minimum on Docplexus.
9. Orthopedic Users having age more than 35 years "comments" maximum on Docplexus.
10. Orthopedic Users having 25-35 years of age "posts" maximum on Docplexus.
11. Orthopedic Users are maximum (36.5%) on Docplexus from North India while least (12.%) from East India.
12. Orthopedic Users from South India have maximum (106) "Activity level" on Docplexus while least from East India.

13. Orthopedic Users from East Indiahave minimum “likes”on Docplexus.
14. Orthopedic Users from West India have maximum “comments” maximum on Docplexus.
15. Orthopedic Users from North & West India“posts” maximum on Docplexus.

RECOMMENDATIONS

1. A strategy may be made to engage and involve from orthopedic users from Gujarat Orthopedic Association & OSSAP (The orthopedic Surgeons Society of Andhra Pradesh).
2. A strategy may be made to engage and involve from orthopedic users having less than < 15 years of experience.
3. A strategy may be made to engage and involve from East India.

CONCLUSION

1. Efforts should be made to encourage more doctors get engaged with docplexus.
2. On the basis of analysis of the report strategy may be made to involve more no. of the users from the association, location where involvement is minimum right now.
3. Efforts should be made to encourage more doctors below 15 years of age to get engaged with docplexus on basis of study results.
4. More the involvement with Docplexus better the sharing of information of cases and knowledge of the key opinion leaders of Healthcare Industry.

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