

Summer Training Report

On

**Doctor's Perception towards future of Pharma Marketing, Role of
Digital Application & Artificial Intelligence in Pharma**

By

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2019-2021



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Acknowledgement

As a Master program student, I feel privileged and grateful in taking this opportunity to express my gratitude to many people who have contributed to the completion of this project

I am very much thankful to Dr. SAURABH BANERJEE, Dean, School of Pharmaceutical management, IIHMR University, Jaipur for allowing us to carry out the internship project. I would like to express my deepest gratitude to Mr. Salil kallianpur (ARKS Knowledge consultancy pvt. Ltd.) for providing me the opportunity to carry out my internship as well as providing continuous support and guidance throughout the internship duration .

I extend my sincere thanks to Dr. SANDEEP NARULA , Placement Incharge for his valuable guidance , support and motivation. I would also like to thank Mr. RAHUL SHARMA (Assistant professor), Summer internship mentor for his kind concern and motivating mentorship throughout the internship project.

I am also thankful to the Doctors of the hospitals, Customers, Retailers and Wholesalers for the cooperation and giving me a friendly environment which made me very comfortable to carry out the project further.

I would like to give my heartfelt thanks to my partner Mr. Nikunj Parwal for help and support in each step, gave knowledge and guidance about its working and related sources and sharing a vision and providing me the opportunity for bringing the initial ideas to accomplish this Internship Project.

I am immensely thankful and express my gratitude to be the student of (IIHMR) Indian Institute of Health Management and Research, Jaipur for facilitating the conduction of this project work. Last but not the least I would like to thank my parents and friends for their constant support.

"Learning the art of expressing gratitude will force you to focus on the positive."

Shruti Dudhande

(Roll No. 210)

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I. EXECUTIVE SUMMARY:

The project assigned was “ **Customers Engagement Model – Customers Experience as a Future of Pharma market**” with objectives being:

1. Customers perception and attitude towards healthcare services .
2. Customers Perception towards Existing Pharmacies, E- Pharmacy – Way Ahead
3. Doctor's Perception towards future of Pharma Marketing, Role of Digital Application & Artificial Intelligence in Pharma.
4. Perception of Retailers towards future of pharma market with the use of Porter’s five force model
5. Mapping the current process of wholesalers/distributors

On these segments we prepared 5 different questionnaire which was further carried out by taking responses from PAN India

The project carried out 3 stages :

- First stage was carried out by secondary research in which I went across various articles about customers healthcare , doctors , retailers and wholesalers .
- The second stage consisted of data collection from PAN India .
- Third stage was to analysis and interpret the data .

Doctor's Perception towards future of Pharma Marketing, Role of Digital Application & Artificial Intelligence in Pharma.

II. ABSTRACT

The pharmaceutical industry is competently characterized as a “life-line industry.” It plays an important role in reducing the pain of people globally and managing numerous illnesses that affect living individuals. However doctors hold an important number of fundamental positions in the pharmaceutical industry, practicing physicians are commonly not aware of the lifeworks in this industry, or of the organogram of a pharmaceutical company, many physicians have not had much introduction to pharma during their clinical practice. Therefore to strengthen the synergy between medicines and academia and also to enlighten doctors considering a career in the pharma industry, it is very important for the pharma companies to enhance doctors knowledge about the operation within pharmaceutical companies. Pharmaceutical companies work in a balanced environment which poses limitations in the nature of promotional and marketing activities they can pursue. These promotional activities consist of Below – the-Line (BTL) activities with a goal to grab their customer segment – the healthcare professionals with a constructive brand experience. So to engage the attention, build exclusive brand association and achieve brand equity with the healthcare professionals, the pharma companies present globally are experimenting with the digital medium. As the Artificial Intelligence is developing, the practice of medication is changing. The reliability and efficacy of prognosis and therapy over diverse specialty are already enhancing with the help of AI- based systems combined with quick enhancement in computer processing. This resulted in looking into whether systems which are based on AI will ultimately takeover doctors of respective specialty or will supplement the functions of doctors without replacing them. This research seeks to evaluate the impact on doctors to further figure out the technology and assess effect of the technology over the medicine. The motive of the research is to understand and assess the perception of physicians towards the pharma market and to know about the acceptability and effectiveness of digitalization and Artificial Intelligence in the Pharmaceutical industry.

Keywords

Doctors perception, pharmaceutical industry, pharma market, digital application, artificial intelligence.

III. INTRODUCTION

The pharmaceutical industry is competently characterized as a “life-line industry.” It plays an important role in reducing the pain of people globally and managing numerous illnesses that affect living individuals. (Bora, 2014). The pharmaceutical industry has recorded tremendous achievements in the health sector and contributed to the economic development of many countries (Ahmed, 2014). India possesses a significant status in the pharma domain worldwide. The pharmaceutical market in India holds third position with respect to volume and thirteenth position with respect to value. Universally, India is one of the massive suppliers of generic drugs (Dhanalakshmi, GROWTH OF INDIAN PHARMACEUTICAL INDUSTRY: An overview , 2017). There is a distinctive interconnection between the pharmaceutical industry, the medicos and the patient. The pharmaceutical industry manufactures the produce which it cannot sell to the patient directly. Contrarily, the physician can't cure the patient unaccompanied by the medicines manufactured by the pharma industry. Therefore, the physicians and the industry are associated with a common goal (Ravindran, The physician and the pharmaceutical industry , 1999). The foremost responsibility of the doctors is to take care of the health of the person who is ill (patients) and the society. Whereas, the industry manages to help us attain the purpose (Rai, THE PHYSICIAN AND THE PHARMACEUTICAL INDUSTRY , 2001). Interactions between doctors and pharmaceutical industry have been increased significantly in over the last several years and it becomes such common activities (Mandal, 2012). India has observed a paradigm shift in the organizational behavior of different industries over the last years. With an increase in the digital engagement, maximum industries have configured their businesses online including a few pharmaceutical companies, while many other pharma companies are still trying to organize their online marketing strategy (Docplexus, 2015). “Digital” became an essential part of daily life. All the sectors were going to adapt more quickly to the digital world. The pharmaceutical industry, but except for the website has not been able to implement digital marketing entirely. There are many problems facing the pharma business when it comes to marketing. In this generation more pharmaceutical companies are using social media sites or ecommerce sites as a medium for digital marketing. That allows the customers to purchase products online. Several companies are trying to understand digital's true value whilst others are incorporating it into the wider marketing strategy (Bharskar, 2020). A research of top 20 drugs manufacturers in India have found that a digital flow is sailing across the Indian

pharmaceutical industry which is worth \$17 billion and companies are shifting from the conventional ways of marketing to newer technologies ranging from e-detailing to physicians to utilizing newer algorithms for effective understanding into situations like patient compliance (Raghavan, Indian pharma sector going digital at a fast pace , 2016). Many physicians have started to follow digital application in their clinical practice. Physicians have started becoming more proficient towards internet and follow the latest updates in the medico field and on the basis of these advances they have started modifying their patient's treatment plans (moPharma, Digital Age – A Boon for Pharma Digital Marketing in India, 2020 , 2020). John McCarthy first coined the term “Artificial Intelligence” for a conference organized at Dartmouth in 1956. Artificial intelligence (AI) is a predominant topic in the field of computer science that attempts to build sophisticated machinery coupled with characteristics of human intellect (Ahuja, 2019). In Pharma, the use of automated algorithms to execute tasks which generally depends on human intelligence is referred as Artificial Intelligence. In recent years, the utilization of A.I. in pharma as well as biotechnology industry has reshaped how experts develop new drugs, deal with diseases, and many more (Arsene, Artificial Intelligence & Pharma: What's Next?, 2020). Artificial Intelligence can optimize the pharma business by its capability to boost R&D, from discovering and formulating novel molecules to drug validation. It can also help in reducing the time taken for a drug trial and approval, so that the drug can be introduced into the market as soon as possible which ultimately results in cost-effectiveness, several treatment options and more nominal therapies (Tierney, Artificial intelligence in pharma: utilising a valuable resource, 2020). Artificial Intelligence can be adapted in the healthcare industry by different ways like directing routine tasks, managing various facts and figures and data, creating medical related consultation process digital, utilizing the convenience of digital nurses, handling medications etc. From making process of healthcare automated to assistance in discovery of drug, Artificial Intelligence plays a significant role and will surely create a revolution in this pharmaceutical industry (Sinhasane, Artificial Intelligence in the Pharmaceutical Industry – An Overview of Innovations , 2019)

IV. LITERATURE REVIEW

Relationship between doctors and pharma industry are usually recorded and discussed in the medical journals and literatures. A recent research unveiled that around 94% of doctors have some sort of association with the pharma industry (R, Who pays for the pizza? Redefining the relationships between doctors and drug companies. 1: entanglement., May 2003). The effects of the interaction between doctors and the pharmaceutical industry have been evaluated and as a result it shows the impact on prescribing manner, behavior and attitude of doctors towards pharmaceutical industry and vice-versa (A, January 2019). The position of the healthcare and connected health is continuously changing due to the digital age and provides several advantages such as providing an effective care experience, enhancing health outcomes and lowering per capita (Iglehart, Connected Health: Emerging Disruptive Technologies, Health , 2014). Nowadays most of the population can easily collect information on health related matters by social networking sites, online details from different sources and blogs and websites in this technological and digital era. So, it becomes important for the pharmaceutical industries to publish accurate and reliable details regarding the drugs and the disease conditions online because it is the only way to get to know about the medicines usage, their indication and contraindication. Hence it is very crucial for the pharmaceutical sector to balance the pace with the digital wave (R.Nalini, Alamelu, Amudha, Badrinath, & GaneshKumar, E-detailing – Empowering doctors in Digital Era., 2017). The pharmaceutical sector is encountering a set of wide ranging variation such as increased competitions, expirations of patent and increased pricing pressures. Digital transformation is shaping the industry as digital services beyond the product itself are being integrated into the range of offering. (Landwehr, Digital Transformation in the Pharmaceutical Industry - From Products to Services ‘Beyond the Pill’ , Novemeber 2015). Digital engagement and digitalization has become an important part of life. Due to ease of interaction with the customers, less time consumption and cost effectiveness, digital marketing is successfully replacing the conventional marketing strategies in the pharmaceutical sector. Adding on digitalization has also created interest among the doctors in using various social media and digital tools (Jawaid & Ahmed, Pharmaceutical Digital Marketing and Its Impact on Healthcare Physicians of Pakistan: A National Survey, June 2018). Digital marketing is the developmental stage in Indian pharmaceutical industry. Pharmaceutical companies are using services based on technology, providing more information to patients related to their disease conditions and keeping them regularly updated about their wellbeing. It may be useful to give the physicians a deep understanding about the wellbeing of

the patient and if any side effects about the products. Using these digital tools it becomes simpler for the physicians to communicate with their patients with ease on certain health conditions (Bharskar & Siddheshwar, DIGITAL MARKETING IN PHARMACEUTICAL SECTOR, January 2020). It also shows an impact on the interaction between physicians, patients and the pharmaceutical organizations (Thackeray, Neiger, Hanson, & Mckenzie, Enhancing promotional strategies within social marketing programs: use of Web 2.0 social media., October 2008). The business models of the Pharmaceutical sector will be transformed by Digital Health. However most of the industries have not yet designed a plan to initiate Digital Health, senior business leaders are expecting that by 2020-21, Digital health apps and tools will help the pharma industries to form new business division which would ultimately enhance their competitive advantage (Görlitz, Impact of Digital Health on the Pharmaceutical Industry, January 2013). As the Artificial Intelligence is developing, the practice of medication is changing. The reliability and efficacy of prognosis and therapy over diverse specialty are already enhancing with the help of AI- based systems combined with quick enhancement in computer processing. This resulted in looking into whether systems which are based on AI will ultimately takeover doctors of respective specialty or will supplement the functions of doctors without replacing them (Ahuja A. S., The impact of artificial intelligence in medicine on the future role of the physician, October 2019). Due to advancement in the computer technologies, learning data design and algorithms and presence of big data derived from medical records and health wearable, Artificial intelligence is ready to play a significant role in the pharmaceutical and healthcare sectors. For Artificial Intelligence, the health care sector is rapidly increasing at a rate of 40 percent as per the future prediction it is expected to mount till 6.6 billion dollars by 2021 (Frost & Sullivan, 2016). AI is expected to have an important impact in chronic disease management and clinical decision making (Bresnick, 2016). AI is yet in its early stage of being accepted, but it shows positive feedback in varied specialties like cardiology, radiology and pathology (Hseih, 2017). Novel concerns emerge from the significance of AI in the health sector such as data liability, privacy concerns (Prince & Cohen, 2019) and concerns related to the online security, responsibility and concerns about the incorporation of tools related to AI within the recent practice and ethics consideration (Lamanna & Byrne, 2018).

V. RESEARCH OBJECTIVE :

1. Perception of doctors towards future of pharma marketing.
2. Doctors perception towards role of digital application in pharma
3. Doctors viewpoint towards Artificial Intelligence

VI. RESEARCH METHODOLOGY :

Type of Research : Discriptive study

Data collection : for the survey online google form was generated with multiple choice questions . Primary data was collected from the doctors throughout the Pan India . secondary data was collected from PubMed Articles , Published journals .

Durations: 3 month (22/04/2020 – 30-07-2020)

Sample Size : 50 Doctors

Data Analysis : the data analysis had been done by using MS Excel

Study Area : Pan India

Data Collection Method:

Primary Data Collection : A pretested structured questionnaire was framed for Data Collection

Secondary Data Collection : Journals , PubMed Articles .

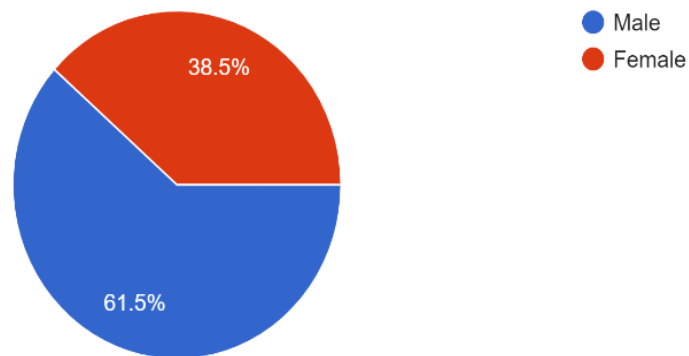
Measure of Ethics : Respondents were assured of Privacy and Confidentiality

Data Analysis and Interpretation:

Analysis and interpretation of the data has been carried out to deduce the conclusions with the aid of appropriate statistical tools.

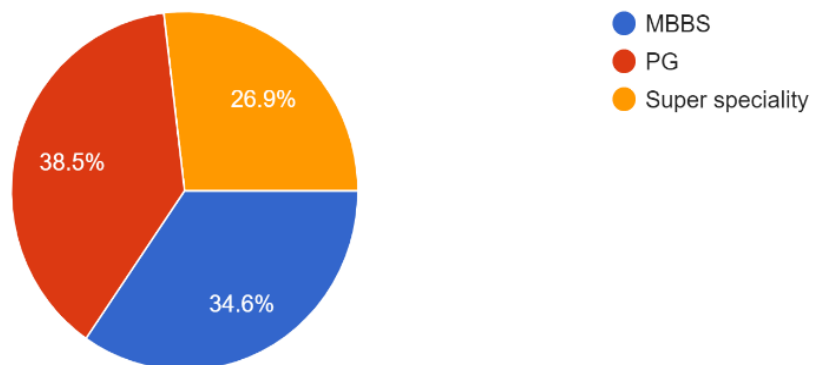
VII. DATA INTERPRETATION AND ANALYSIS :

1. Gender



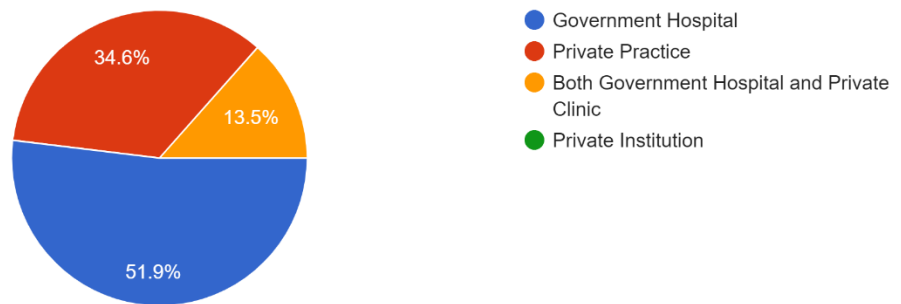
Analysis : This Piechart shows that out of 50 Doctors 61.5% are Male and 38.5% are female . by this we can state that Male Doctors found this study more helpful as compared to female Doctors and also male Doctors are more interested in giving responses as compared to Female Doctors .

2. Qualification :



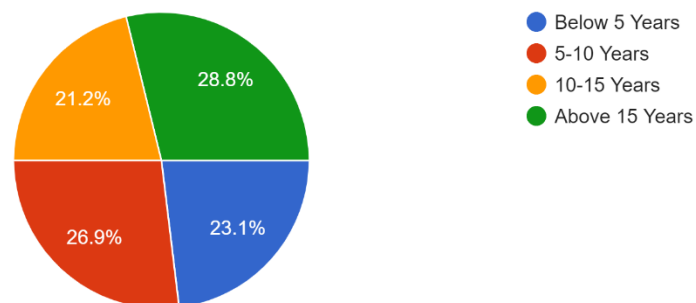
Analysis: This graph shows the qualification of the doctors where, 38.5% of doctors were PG , 34.6% were MBBS and 26.9% were super speciality Doctors .

3. Place of Practice :



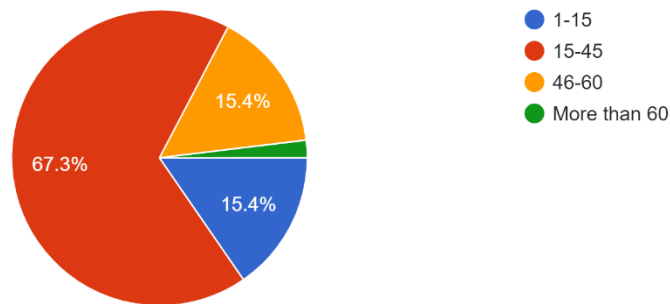
Analysis : This pie chart shows doctors place of practice as where they practice now , in which we found 51.9% of doctors are currently practicing in government Hospital , while 34.6% are in private practice and 13.5% are practicing in both government hospital and private clinic .

4. Year of Practice :



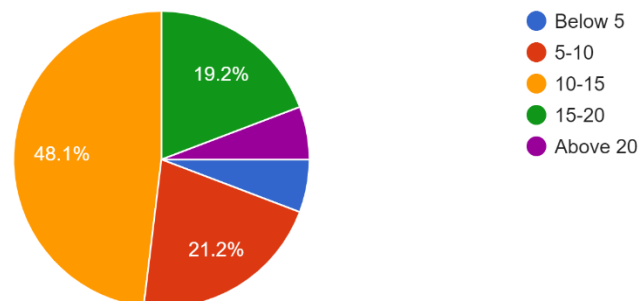
Analysis : This pie chart shows years of practice out of 50 doctors , 28.8% doctors have experience of above 15 years, 26.9% Doctors have 5-10 years of practice , whereas 21.2% of doctors have 10-15 years of experience .

5. Approximate number of patients seen per day :



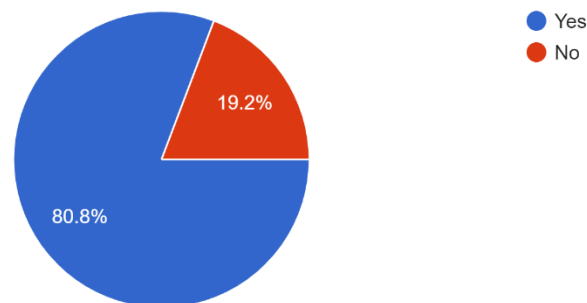
Analysis : This graph shows Approximate number of patients seen per day , out of 50 doctors 67.3% doctors see 15-45 patients per day , whereas 15.4% doctors see 1-15 patients per day .

6. Approximate number of MRs Visit per week :



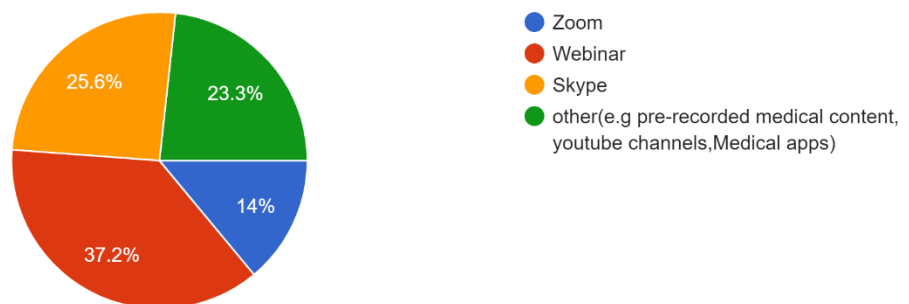
Analysis : This graph shows Approximate number of MRs visit per week, out of 50 doctors 48.1% doctors allow 10-15 MRs per week , whereas 21.2% doctors allow 5-10 MRs per week and only 19.2% doctors allow 15-20 MRs .So this graph shows the maximum number of doctors allow between 10-15 MRs per week .

7. A) Have you experienced Online product detailing with the Medical reps/Pharma professionals?



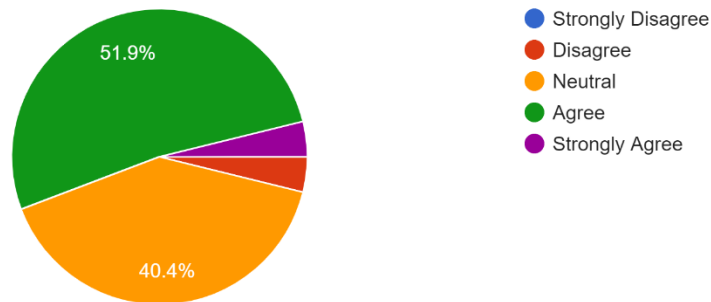
Analysis : This graph shows doctors experience with online product detailing with medical reps /pharma professionals , here 80.8% doctors have said yes they have experienced online product detailings whereas , 19.2 % doctors have not experienced online detailing of product .

8.B) If yes, Did you ever used these application for having virtual meeting with Market Representative?



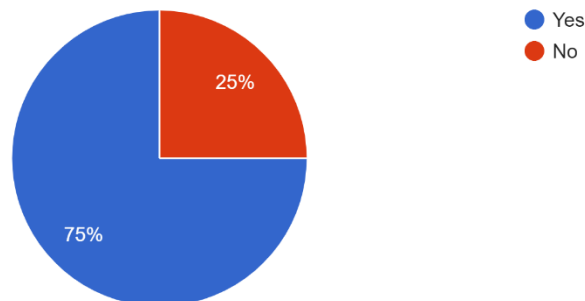
Analysis : This graph shows doctors use & application for having virtual meeting with Market Representative, so 37.2% doctors responded for webinars , 25.6% doctors prefer skype 23% doctors responded for others and only 14% doctors responded for zoom . so from this we can say that use of webinars during this pandemic have become doctors more preferred applications for virtual meetings .

8. After your online interaction , does your perception towards the company improves/changes:



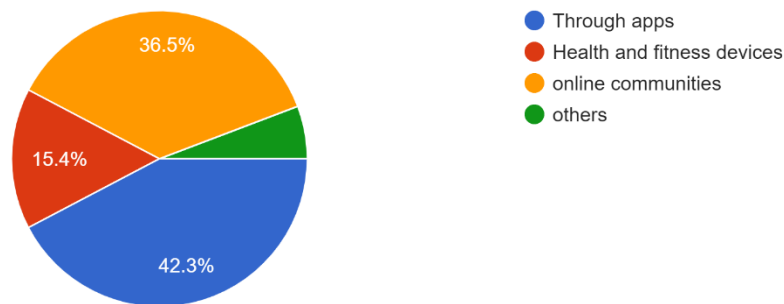
Analysis : This graph shows perception of doctors towards the company changes /improves , so out of 50 doctors 51.9% doctors said they agree whereas , 40.4% responded that perception remained neutral . this shows somewhat the perception of doctors have changed , due to online interaction .

9. Due to digitalization do you think patients are much less dependent on their doctors for advice?



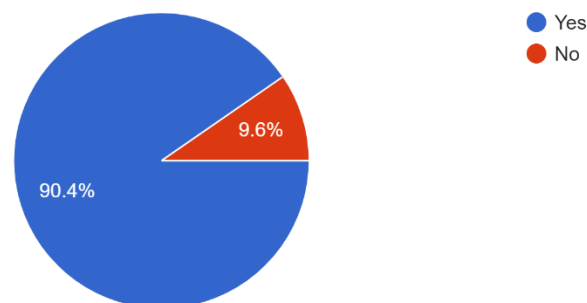
Analysis : This graph shows the dependency of patients on doctors due to digitalization , in this it shows around 75% doctors said yes , whereas 25% said no ,so we can say that due to digitalization patients are less dependent on their doctor for advice .

10. If online platform is the medium then how would you engage your patients ?



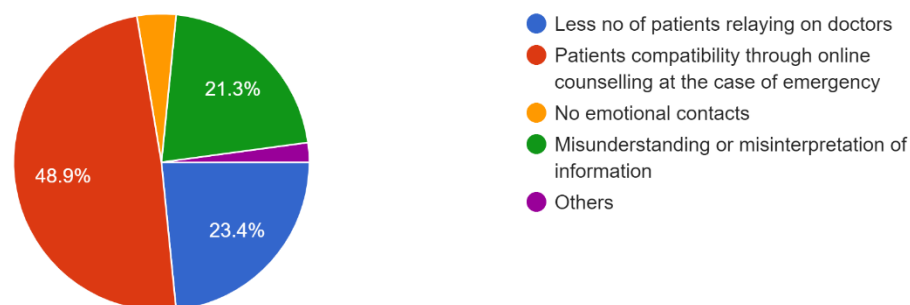
Analysis : The above graph shows the analysis of if online platform is the medium then how would doctors engage with patients so , 42.3% doctors said through apps whereas, 36.5% doctors responded for online communities and 15.4% doctors responded for health and fitness devices . so it is clear that overall maximum doctors prefer apps to engage with their patients.

11. a) Does online counselling affects the choice and impact of therapy on patients life ?



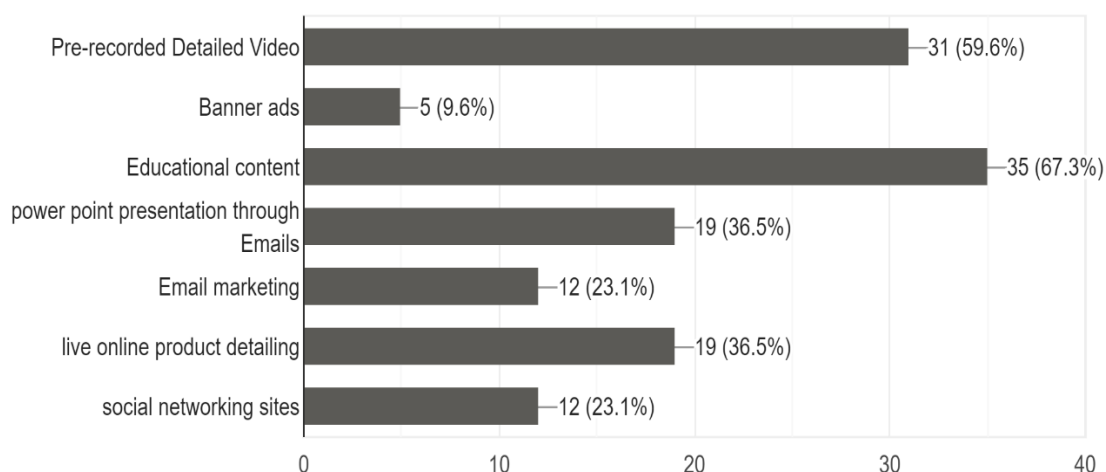
Analysis : The above graph shows 90.4% doctors said yes that online counselling affects the choice and impact of therapy on patients life whereas, 9.6% doctors said no .so on the basis of graph it shows that online counselling affects the choice and impact on patients life .

11 b) If yes, what is the Impact of online counselling?



Analysis : The above graph shows the Impact of online counselling, so 48.9% said impact can be patients compatibility through online counselling at the case of emergency whereas, 23.4% doctors responded for impact can be due to less number of patients relaying on doctors.

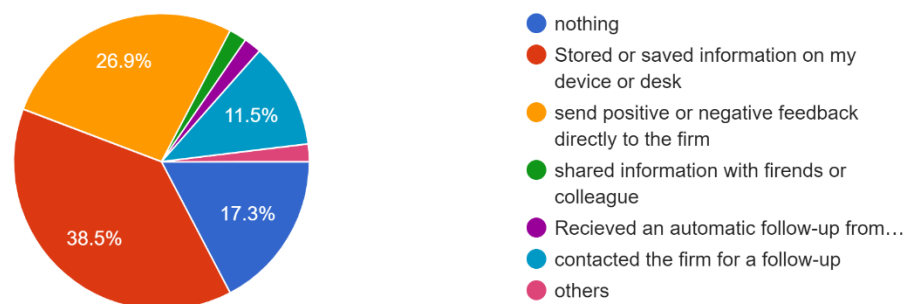
12. How pharmaceutical companies can digitally engage with you when promoting a product or brand?



Analysis : The above graph shows how pharmaceutical companies can digitally engage with doctors when promoting a product or brand so here, 67.3% doctors said educational content

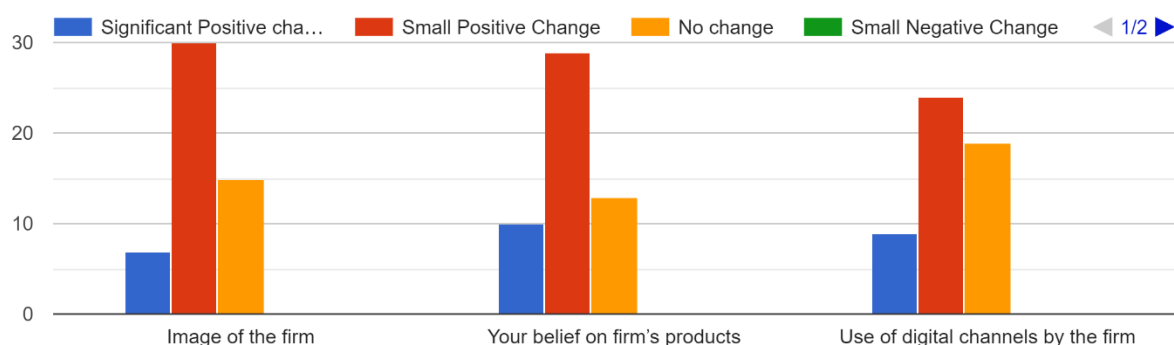
whereas 59.6% Doctors responded for pre- recorded detailed video and only 9% doctors responded for banner ads . so its clear that doctors prefer educational content and pre- recorded video from pharmaceutical companies when promoting a product or brand .

13. What did you do as a result of your most recent interaction(online and offline)with a pharmaceutical company?



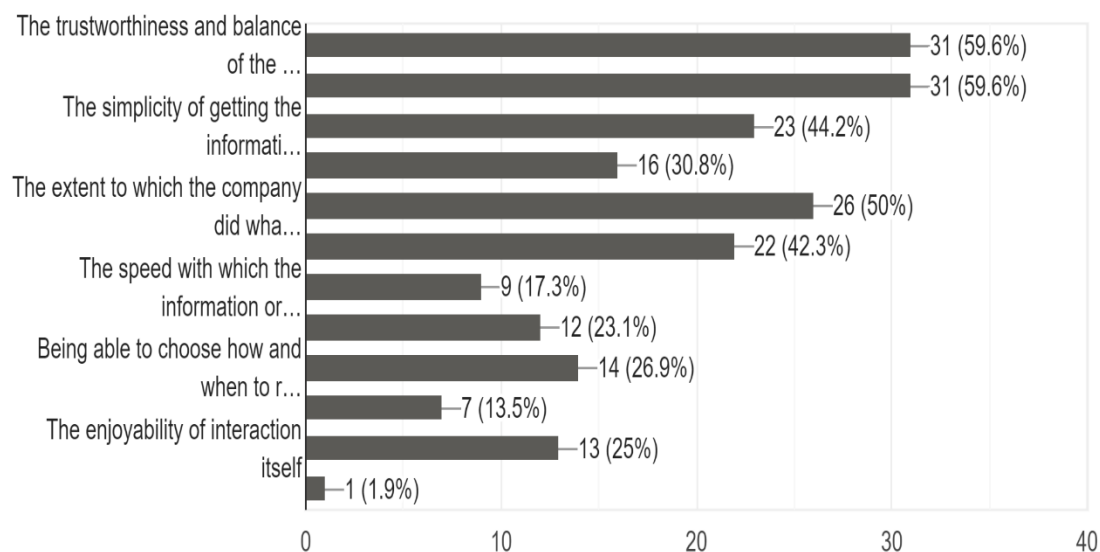
Analysis : The above graph shows the doctors most recent interaction with pharmaceutical for example in the above graph , it shows that the 38.5% doctors stores and save information in their device ,while 26.9% doctors send positive or negative feedback directly to the firm . so it shows that many doctors store and save information on their devive or desk .

14. How did your most recent interaction(online and offline) with a pharmaceutical company affect your Perception of the following?



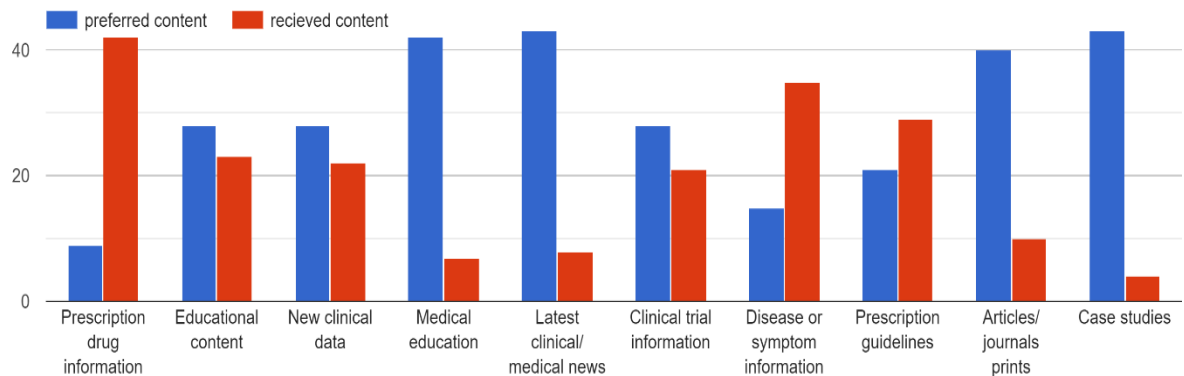
Analysis : The above graph shows the how the perception affects the pharmaceutical company for example in the above graph , it shows that there is small positive change in image of the firm , doctors belief on firms product whereas use of digital channels by the firm.

15. What all aspects are most important to you in any of the ONLINE interaction you have with pharmaceutical company?



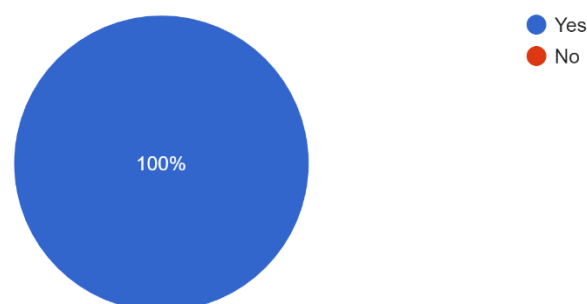
Analysis : The above graph shows what all aspects are most important to doctors in any of the ONLINE interaction they have with pharmaceutical company so here , 59.6% doctors responded for The trustworthiness and balance of the information or service. Whereas, 59.6% doctors also responded for The relevance of the information or service, whereas only 1.9% doctors responded for The beauty of the appearance of the information or service

16. What kind of ONLINE information do you most prefer to get from pharmaceutical firms, and what do you actually receive most often?



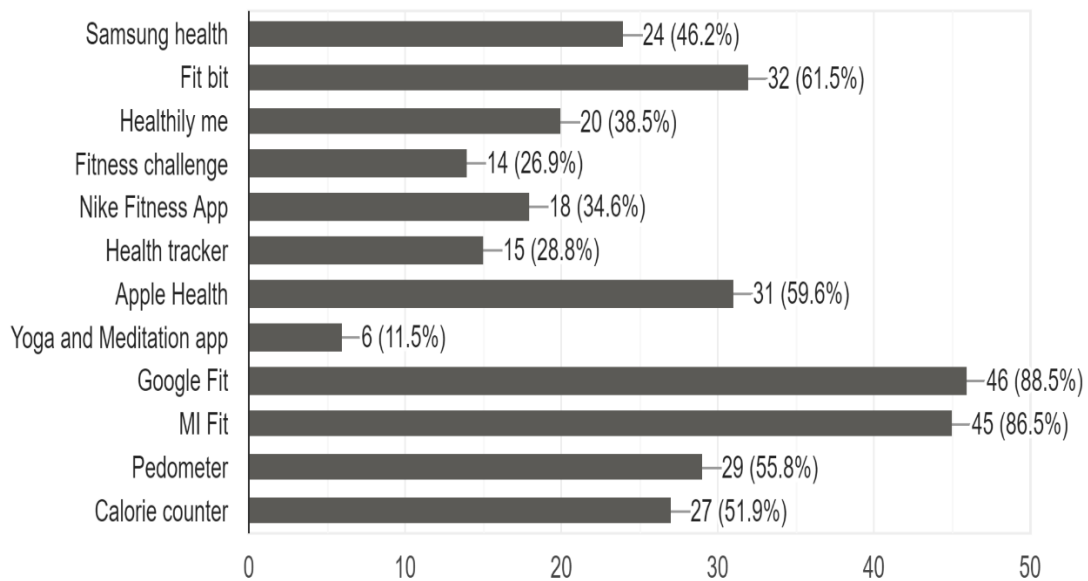
Analysis : The above graph shows the kind of ONLINE information doctors mostly prefer to get from pharmaceutical firms for example in the above graph , it shows that the 40% of doctors receive prescription drug information , doctors prefer educational content , medical education , articles / journals & case studies which are not provided to them .

17. A) Are you aware of health apps ?



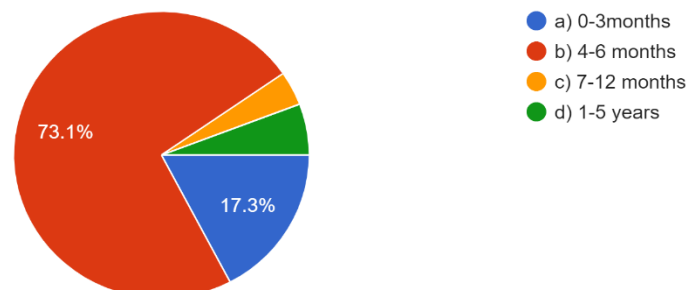
Analysis : The above graph shows are doctors aware of health apps . so here , every doctor was aware of health apps which are been widely used all over the world .

17 B)If, yes which of the following do you know(please tick the option applicable to you)?



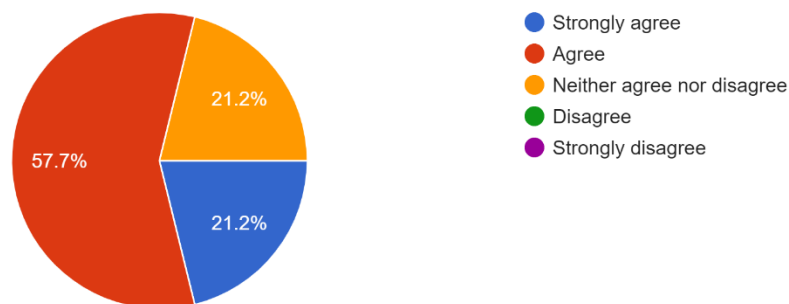
Analysis : The above graph shows health apps which are widely used , 88.5% doctors are aware of Googlefit app and 86.5% doctors are aware of MI fit and there are many more apps used whereas , 61.5% doctors know about fit bit . so this clearly shows Googlefit and MI fit apps are the most preferred apps by doctors.

18. What should be the Duration of use for Mobile Health apps?



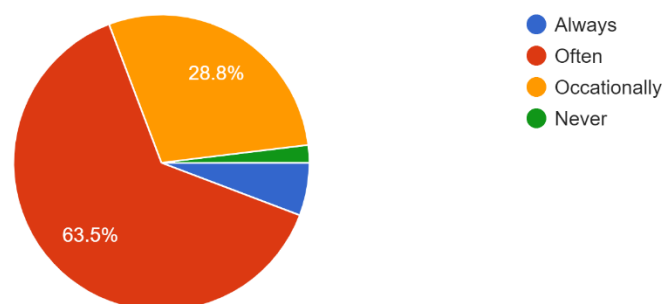
Analysis : The above graph shows the duration of use of mobile health app , so here 73.1% doctors responded for 4-6 months whereas , 17.3% doctors responded for 0-3 months so , mainly these health apps should not be used more than 6 months .

19. Do you think that Artificial Intelligence has useful application in the medical field?



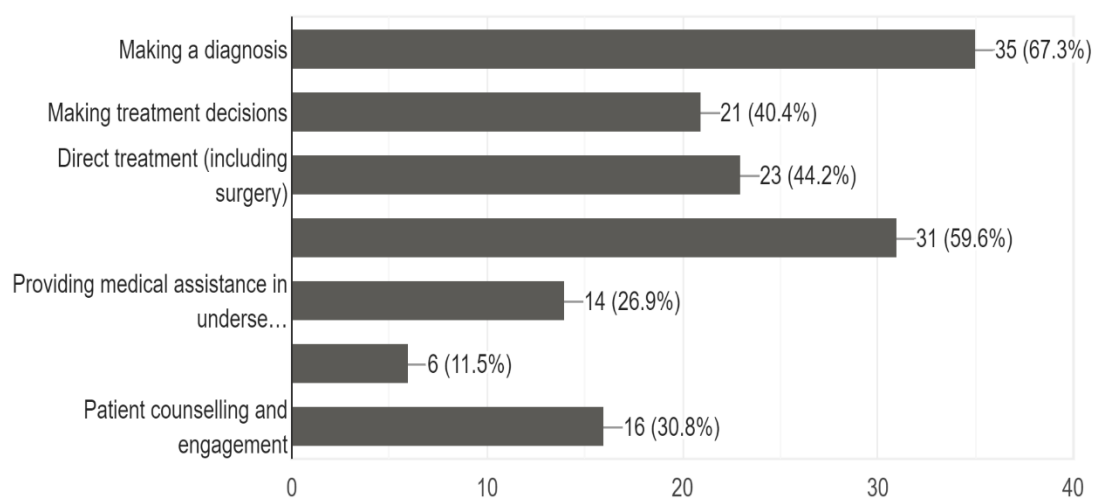
Analysis : The above graph shows perception of doctors towards artificial intelligence has useful application in medical field for example is there in the above graph , it shows that the 57.7% doctors responded to they agree , while 21.2 % doctors saty neutral they neither agree nor disagree . overall this graph shows Artificial Intelligence has useful application in the medical field .

20. Do you think that you would always use AI when making Medical decisions in the future?



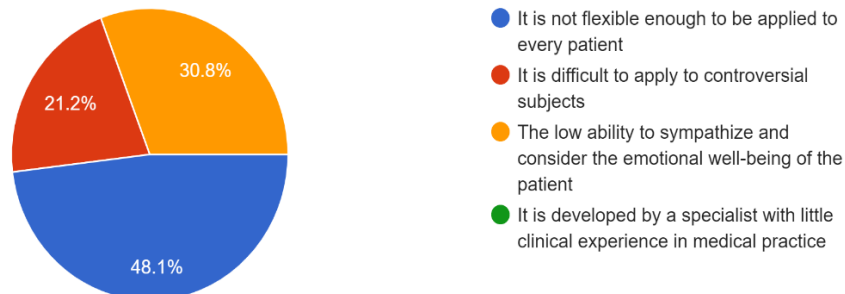
Analysis : The above graph shows will doctors always use AI when making Medical decisions in the future in the above graph , it shows that the 63.5% doctors said they will often use , whereas 28.8% doctors responded for occasionally using AI in future . This graph shows there will be often use of artificial intelligence when making medical decisions in the future .

21. In which field of medicines do you think artificial Intelligence will be most useful?



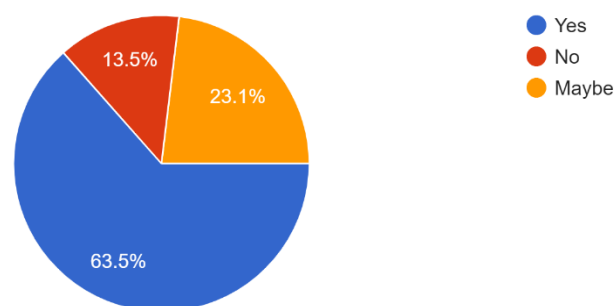
- a) **Analysis :** The above graph shows the field of medicines do doctors think artificial Intelligence will be most useful, so in this we came to know that 67.3% doctors preferred in making a diagnosis AI will be used , whereas 59.6% doctors preferred in Biopharmaceutical research and development the AI will be mostly used , so its clear that use of AI will be in making diagnosis and in research and development .

22. What are your concerns about application of AI in medicine?



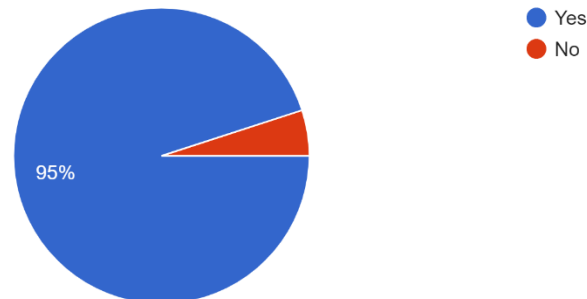
Analysis : The above graph shows the concern about applications of AI in medicine ,so here 48.1% doctors said it is not flexible enough to be applied to every patient , whereas 30.8% doctors responded for the low ability to sympathize and consider the emotional well being of the patients. So from this it is clear that doctors are more concern about patients as it will not be flexible to be applied on every patient.

23. A) Do you think MR's can be replaced by AI services?



Analysis : The above graph shows do doctors think MRs can be replaced by AI services , so here 63.5% doctors responded for yes , whereas , 23.1 responded for maybe and 13.5% responded for no . so from this its clear that yes , MRs can be replaced by AI services in future.

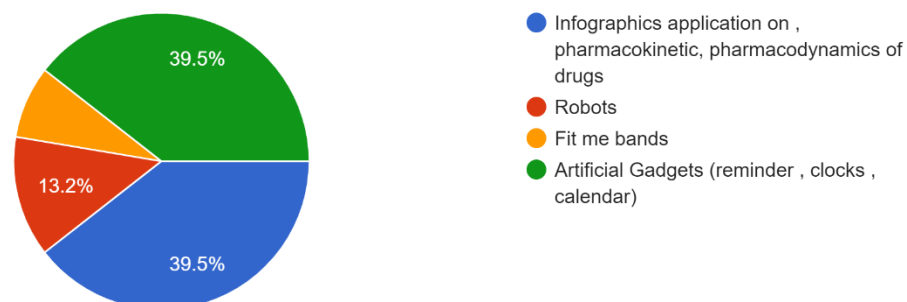
24.B) If yes, Will you prefer any artificial intelligence (AI) services for promoting of drugs by pharmaceutical company?



Analysis : The above graph shows will doctors prefer any artificial intelligence (AI) services for promoting of drugs by pharmaceutical company, so here 95% doctors responded yes because promoting of drug by pharma company will be easy as compared to MRs visit to hospitals and clinics .

24 C) . If yes , From the following which AI service you would use instead of MRs

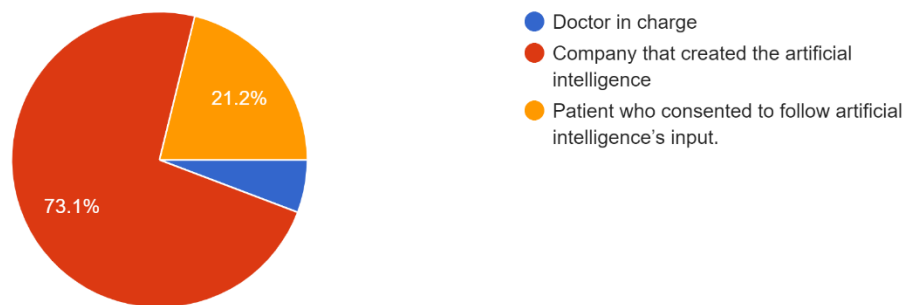
Online application including:



Analysis : The above graph shows the the following which AI service doctors would use instead of MRs Online application so here , 39.5% doctors responded for Infographics applications of pharmacokinetic and pharmacodynamics of drug and also 39.5% doctors responded for Artificial Gadgets (reminders , clocks and calenders) whereas 13.2% doctors responded for

Robots . so from this graph its clear that doctors would prefer Inforgraphics and Artificial Gadgets instead of MRs .

24. Who do you think will be liable for legal problems caused by artificial intelligence?



Analysis : The above graph shows, liability for legal problems caused by artificial intelligence for example in the above graph , it shows that the 73.1% doctors responded for company that created artificial intelligence whereas , 21.2% doctors responded for patients who consented to follow artificial intelligence input .So, this graph tells us that the company created AI will be liable for legal problems caused by artificial intelligence.

VIII. RESULT:

The survey was conducted in pan india during April 2020 to July 2020 . these include 50 doctors . From the data it is been observed that male doctors with 61% where more interested in filling the forms rather females who were 38 % . Out of them 52% where from government hospital and 34% of doctors were working in private practice. Through this survey we found that 80% of doctors have experienced online product detailing with medical reps/ pharma professional where they used applications having virtual meeting more on webinars (37%) as compared to other applications .51% doctors said through this online interaction the perception of doctors changes towards the company and due to digitalization the doctors think patients are much less dependent on them for advice . we also found that impact of online counselling is more because of patients compatibility through online counselling at the case of emergency . while promoting a product or brand pharmaceutical companies can engage through pre-recorded detailed videos (31%) & through educational content with (35%). Through online information Medical education , latest clinical /medical news and Articles/ journals are the most preferred contents from pharmaceutical company .Company should have effective field staff and good distribution system these are the main qualities expected by the doctors from a pharma company . Now a days everyone is aware of health apps , doctors mostly prefer Google Fit (46%) and MI fit (45%) and the use of these mobile health apps should be not more than 4-6 months . Artificial Intelligence play a very important role in medical field and doctors think use of Artificial Intelligence will be often for making decisions in future . Artificial Intelligence will be used for making a diagnosis and even 63% doctors said MRs can be replaced by Artificial Intelligence and 95% doctors prefer this service for promoting drugs by pharmaceutical company . with the help of infographics on pharmacokinetics , pharmacodynamics of drug Artificial Intelligence service would be used instead of MRs .

IX. CONCLUSION :

Pharmaceutical companies are facing increasing pressure from governments, patients and new competitors to adapt the product-only business. This paper demonstrates that 'new digital businesses' in the form of digital services. The intervention of technology in health care has made patients as dynamic participants in delivery process. To gain better outcomes with minimum costs, the innovators are finding the way to implement techniques. At present, pharma companies believe that e-detailing the products with doctors seems to be more profitable as it consumes less time and cost. Building trust and convenience into the physician relationship may bring effectiveness in e-detailing. E-detailing makes the doctor to interact with the information and explore the features of the product. In recognition of this important trend in modern medicine, medical schools are strengthening their emerging technology curricula. AI will support the future needs of medicine by analyzing the vast amounts and various forms of data that patients and healthcare institutions record in every moment. AI is likely to support and augment physicians by taking away the routine parts of a physician's work hopefully enabling the physician to spend more precious time with their patients, improving the human touch.

X. LIMITATIONS :

1. The research study is limited to the selected Stakeholders like Doctors from PAN India. Hence results may or may not vary with change in stakeholders, their sample size as well as change in the research area. The study was conducted in COVID-19 pandemic situation due to nationwide lockdown the data is collected online.
2. The study was done for the selected time period of time and was completed in the stipulated time. Therefore limited time and time-frame are other limitations of study.
3. Due to organization confidentiality or other issues, stakeholders might not disclosed the real information. Therefore the conclusions are based upon the information provided by the respondents.
4. Some other limitations includes refusal of some respondents to participate in the study, non-cooperation in providing required information and giving biased or misleading information. Even though we have taken utmost care in collecting the genuine data required for the research but we might have fall short somewhere due to lack of expertise in conducting such researches.

5. Hence, selected stakeholders, specific research area, limited sample size, limited time & time-frame and secrecy are the major limitations of this study.

XI. RECOMMENDATIONS :

Based on the findings , pharmaceutical companies should adapt their traditional product-only business model by merging products with services .In the long-term, these services should play the role of ‘outcome-enhancers’ and contribute to a new outcome-focused value proposition. Experts and literature agree that pharmaceutical companies must engage in various partnerships to ensure the successful development and implementation of services.

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XIII. ANNEXURE:

1. Name (optional): -----

2. Gender:

- a) Male
- b) Female

3. Qualification:

- a) MBBS
- b) PG
- c) Super speciality

4. Place of obtaining Medical Education:

- a) Within India
- b) Outside India

5. (a) Place of practice :

- a) Government Hospital
- b) Private Practice
- c) Both Government hospital and private clinic
- d) Private institution
- e) Both government and private hospital

(b) Location of private practice:

- I. Urban
- II. Rural

6. Years of Practice:

- a) Below 5 years
- b) 5-10 years
- c) 10-15 years
- d) Above 15 year

7. Approximate number of patients seen per day :

- a) 1-15
- b) 15-45
- c) 45-60
- d) >60

8. Approximate number of MRs visit per week:

- a) Below 5
- b) 5-10
- c) 10-15
- d) 15-20
- e) Above 20

Q.1 Please rate the given sources of your information on a esp..w.r.t. new products /new information five point scale as Highly Preferred/Preferred/Moderate/Not Preferred/Not At All Preferred

Sl.No.	Information Sources	Highly Preferred	Preferred	Moderate	Not Preferred	Not At all Preferred
1.	Medical Representatives					
2.	Mailers from pharmaceutical companies					
3.	Internet					
4.	Medical journals and textbooks					
5.	Conferences and CMEs/Webinars					
6.	Literatures					
7.	Digital communities					
8.	Colleagues/peers/ professional meetings					

Q2. Have you experienced Online product detailing with the Medical reps/Pharma professionals?

- a) Yes
- b) No

2b) If yes, Did you ever used these application for having virtual meeting with Market Representative?

- a) Zoom
- b) Webinars
- c) Skype
- d) Other (e.g. pre -recorded medical content, You tube channels, Medical apps)____

Q2c)

After your online interaction , does your perception towards the company improves/changes	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree

Q3. Due to digitalization do you think patients are much less dependent on their doctors for advice?

- a) Yes
- b) No

Q4. If online platform is the medium then how would you engage your patients.

- a) through apps
- b) health and fitness devices
- c) and online communities
- d) other

Q5.(a)Does online counselling affects the choice and impact of therapy on patients life ?

- a) Yes
- b) No

B) If yes, what is the Impact of online counselling?

- a) Less no of patients relaying on doctors
- b) Patients compatibility through online counselling at the case of emergency
- c) No emotional contact
- d) Misunderstanding or misinterpretation of information
- e) Others

Q.6 How pharmaceutical companies can digitally engage with you when promoting a product or brand?

- a) Pre recorded Detailed Video
- b) Banner ads
- c) Educational content
- d) Power point presentations thru email
- e) Email marketing
- f) Live online product detailing
- g) Social networking sites

Q7. What did you do as a result of your most recent interaction(online and offline)with a pharmaceutical company?

- a) Nothing
- b) Stored or saved information on my device or desk
- c) Send positive or negative feedback directly to the firm
- d) Shared information with friends or colleague
- e) Received an automatic follow-up from the firm
- f) Contacted the firm for a follow-up
- g) Others

Q8. Please rank the problems encountered by you while prescribing.

Problems	
Presence of numerous (me-too)companies	
Presence of numerous (me too) products	
Pressure of MRs to prescribe	
Available of information at digital platforms	
Patient prior knowledge before Doctors visit	

Q9. How did your most recent interaction(online and offline) with a pharmaceutical company affect your Perception of the following?

View	Significant positive change	Small positive change	No change	Small negative change	Significant negative change
Image of the firm					
Your belief on firm's products					
Use of digital channels by the firm					

Q 10. What all aspects are most important to you in any of the ONLINE interaction you have with pharmaceutical company? (please tick the options applicable to you)

- a) The trustworthiness and balance of the information or service
- b) The relevance of the information or service
- c) The simplicity of getting the information or service
- d) The overall integrity with which the company acted
- e) The extent to which the company did what is best for me and my patients, not what was best for itself.
- f) The consistency of the information or service
- g) The speed with which the information or service was provided.
- h) The amount of information
- i) Being able to choose how and when to receive the information or service
- j) Being treated as valued customer
- k) The enjoyability of interaction itself
- l) The extent to which company met my needs
- m) The beauty of the appearance of the information or service

Q 11. What kind of ONLINE information do you most prefer to get from pharmaceutical firms, and what do you actually receive most often?

s.no	Information	Preferred content	Received content
1.	Prescription drug information		
2.	Educational content		
3.	New clinical data		
4.	Medical education		
5.	Latest clinical/medical news		
6.	Clinical trial information		
7.	Disease or symptom information		
8.	Prescription guidelines		
9.	Articles/journals prints		
10.	Case studies		

Q 12. What kind of interaction do you most prefer to have with pharmaceutical firms, and what kind of interaction do you actually have most often?

s.no	Interaction	Preferred channel	Received channel
1.	Face to face meeting with medical rep.		
2.	Online meeting with Medical rep		
3.	Pre recorded Product Detailing by the company		
4.	Physical + Online Meeting by the Pharma professionals (Med Reps)		
5.	Website		
6.	eNewsletter		
7.	Call from a pharma rep.		
8.	Live virtual event		
9.	Email from a pharma rep.		
10.	Mobile app		

Q13. Please rate on 1-5 point scale the qualities expected in future from a pharmaceutical companies .

Qualities	1	2	3	4	5
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Be research based					
Have effective field staff					
Be socially responsible					
Have a good distribution system					
Be patient friendly					
Provide value addition to practice					
Provide specialty promotion					

Q14. Are you aware of health apps ?

- a) Yes
- b) No

B)If, yes which of the following do you know(please tick the option applicable to you)

Name of the mobile health app	
Samsung health	
Fit bit	
Healthily me	
Fitness challenge	
Nike Fitness App	
Health tracker	
Apple Health	
Yoga and Meditation app	
Google Fit	
MI Fit	
Pedometer	
Calorie counter	

Q15. What should be the Duration of use for Mobile Health apps?

- a) 0-3months
- b) 4-6 months
- c) 7-12 months
- d) 1-5 years

Q16. Do you think that Artificial Intelligence has useful application in the medical field?

- a) Strongly agree
- b) Agree
- c) Neither agree nor disagree
- d) Disagree
- e) Strongly disagree

Q17. Do you think that you would always use AI when making Medical decisions in the future?

- a) Always
- b) Often

- c) Occasionally
- d) Never

Q18. In which field of medicines do you think artificial Intelligence will be most useful?

- b) Making a diagnosis
- c) Making treatment decisions
- d) Direct treatment (including surgery)
- e) Biopharmaceutical research and development
- f) Providing medical assistance in underserved areas
- g) Development of social insurance program
- h) Patient counselling and engagement

Q19. What are your concerns about application of AI in medicine?

- a) It is not flexible enough to be applied to every patient
- b) It is difficult to apply to controversial subjects
- c) The low ability to sympathize and consider the emotional well-being of the patient
- d) It is developed by a specialist with little clinical experience in medical practice

Q20. a) Do you think MR's can be replaced by AI services?

- a) Yes
- b) No

b) If yes, Will you prefer any artificial intelligence (AI) services for promoting of drugs by pharmaceutical company?

- a) Yes
- b) No
- c) If yes, From the following which AI service you would use instead of MRs
Online application including
 - a) infographics application on, pharmacokinetic, pharmacodynamics of drugs
 - b) Robots
 - c) Fit me bands
 - d) Artificial Gadgets (reminder, clocks, calendar)

Q21. Who do you think will be liable for legal problems caused by artificial intelligence?

- a) Doctor in charge
- b) Company that created the artificial intelligence
- c) Patient who consented to follow artificial intelligence's input.

Shruti Report

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STUDENT PAPERS

PART – 2

(Online Course Report)

ONLINE COURSE REPORT

“ Become a Product Manager | learn the skills and get the job ”

Under the Guidance of

Mr. Rahul Sharma

(Assistant Professor)

Submitted By

SHRUTI DUDHANDE

MBA PHARMACEUTICAL MANAGEMENT

(2019-2021)



INSTITUTE OF HEALTH MANAGEMENT RESEARCH

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ACKNOWLEDGMENT

“It is impossible to make a report without the assistance & encouragement of our people. This is certainly no exception”.

On the very outset of the report, I would like to present my sincere and heartfelt obligation towards all personages who helped me in this endeavour without their active guidance, help, cooperation & encouragement, I would not able to headway in this online course report .

I am extremely thankful and pay my gratitude to my Mentor **Mr. Rahul Sharma** for his valuable guidance and continuous support on the completion of this report in its presently.

I extend my gratitude to the Indian Institute of Health Management and Research University, Jaipur for giving me this opportunity.

Any omission in this brief acknowledgment does not mean a lack of gratitude.

Thanking you,

Shruti Dudhande

Table of content :

I.	Name of the course
II.	Medium of knowledge delivery
III.	Start date
IV.	End date
V.	Subject Area
VI.	Delivery Provider
VII.	Instructor
VIII.	Course content
IX.	Course Description
X.	Outcome of course
XI.	Skills Attained.....

NAME OF THE COURSE : Become a Product Manager | Learn the skill and get the job

MEDIUM OF KNOWLEDGE DELIVERY :

- Lectures
- Video
- Activities
- Interviews
- Reading Material

START DATE : 5th May 2020

END DATE: 24th May 2020

SUBJECT AREA : Product Manager

DELIVERY PROVIDER : Udemy

INSTRUCTOR :

1. **Cole Mercer** who has been a Senior Product Manager at Soundcloud, Bonobos, Mass Relevance, and has taught the Product Management course at General Assembly in Manhattan, NYC.
2. **Evan Kimbrell who** is a Top rated Udemy instructor with 11 courses on everything Entrepreneurship and His courses have over 35,000 students and an average rating of 4.9 / 5.0.

COURSE CONTENT :

- ✓ To understand the product manager role and responsibilities
- ✓ The definition of a product
- ✓ The difference between 3 types of PMs
- ✓ What personality types and what level of experience of the three PM types
- ✓ Difference between product management & project management
- ✓ Real life examples of product that are in each of the four products lifecycle phases
- ✓ Steps need to follow before launching your product
- ✓ Explaining the lean framework and the lean mindset
- ✓ The main sources of gathering ideas as product Manager
- ✓ Figuring out if you are actually solving a real problem
- ✓ The difference between users and customers
- ✓ How to figure out the size of the market
- ✓ Finding competitors as a Product Manager
- ✓ Difference between four main type of competitors
- ✓ The 5 Criteria for Understanding Competitors
- ✓ What's Feature table?
- ✓ Monitoring your competitors
- ✓ What is customer development ?
- ✓ finding interviewees externally
- ✓ Practice writing Emails
- ✓ The Product Manger & the data diet
- ✓ What is MPV ?
- ✓ The Risk/ difficulty square
- ✓ What is hypothesis ?
- ✓ HEART Matrix
- ✓ Roadmapping
- ✓ Prioritization
- ✓ General communication skills
- ✓ Why learn technology
- ✓ Branding Yourself

COURSE DISCRIPTION :

To understand the product manager role and responsibilities :

Dan Schmidt said “ The ambiguity of the product management role is near to its essence.”

The **Role** of PM and their responsibilities change across different industries and different companies We are not manager of anybody , we are a communicator that puts all the pieces together by getting feedback from everyone else .

The **Responsibility** of the PM is a communication hub, a prioritizer, a researcher , a presenter but most importantly they are responsible for the ultimate success of the product .

The definition of a product :

A product could be anything , the PM is not always in charge of an entire product , but of certain sections of it . Specific feature of can be assigned to an entire feature team to develop it. PM can also be split up by plateform .

The difference between 3 types of PMs:

Difference between is that they have different stakeholders .stakeholders are the people who have input into what you are building .

Example: users, shareholders , lawyers , marketing

- Internal product manager :
 - builds tools for other people inside the company
- Business to business Product Manager :
 - the client are the other company
 - the PM interact with the sales people of the company
- Business to consumer Product Manager :
 - The client is the average consumer
 - It requires a lot of vision and creativity
 - The PM has to get feedback from users and analyze the data in order to adopt the product

What personality types and what level of experience of the three PM types :

Internal PM	Business to business PM	Business to consumer PM
Great for starting out	Good introduction role	Uncertainty and pressure
Learn a lot about technology	Can be flexible and creative	Have to do extensive user testing
Less risk	Tight deadlines	High risk , company can lose money
Learn a lot of project management	One or very few platforms	Multiple platforms
Integrate with other systems	Small number of users	Millions of users

THE INTERNAL PM

BUILDING PRODUCTS FOR YOUR OWN COMPANY

Your products solve problems, create efficiency, and have your coworkers looking at you like you're Santa Claus.



Ability to prioritize
People are going to want one thing plus 20 more, so you need to figure out what stays and goes.



Organized
Your to-do list is going to be galactic.



Ability to juggle
Yeah, like, actually juggling. That's what we mean.



Decisive
You won't be able to make everyone happy and that's ok.



Diplomatic
People are going to...disagree about which direction to head in. Put out the fires and carry on.



Self-Driven
You will be given a lot of independence. What you do with it is up to you, padawan.

THE B2B PM

BUILDING PRODUCTS FOR OTHER COMPANIES

You build products for companies who sell to other companies. The stakes are high in this game, as what you create affects the Hamptons' housing market.



Communicative
You will be working with a lot of people and will need to be able to get your point across.



Attentive
Anticipate what's next for the company, not just the here and now.



Dedicated
These companies are going to want results, and fast.



Collaborative
You should be able to navigate through the stormy sea of opinions.



Problem Solver
The company might not give you a lot of information to work with, but you'll make it work, eventually.



Confident
You have got to hold your own among a lot of uber-confident people.



🌈 Difference between Product Management & Project Management :

Product Management	Project Management
Responsible for the success of the product	Responsible for achieving a project , not a goal
Success is defined by KPI or Matrics	A project usually has a timeline and a budget as a constraint
The method by which they reach their goals is not defined , its up to them and their team	
As a product manager , you have to have the skill of Project management the order of managing the execution of the project	

🌈 Four Phases of Product lifecycles :

Once the company has developed a new product , the product goes through 4 main stages

1. Introduction :

- The company introduces the product to the market
- There is little to no competition
- The business typically loses money on the item

2. Growth :

- The product has been accepted by the marketplace
- The sales start to rise
- The company starts improving the product
- There are still few competitors enter the market

3. Maturity :

- Sales will reach their peak
- More competitors enter the market
- The company finds it difficult to compete

4. Decline :

- The company reaches its saturation point
- The sales begin to diminish
- Products are phased out from the marketplace
- The product is deemed old or irrelevant

Real life examples of product that are in each of the four products lifecycle phases :

Introduction - rhythm.co

Growth - Snapchat

Maturity - Twitter

Decline - Yahoo

Steps need to follow before launching your product :

There are 7 phases that products go through while they're being developed :

Conceive :

- we collect user problems and brainstorm solutions
- The biggest source of ideas is usually inside of the company

Plan :

- Market research on the ideas we got in phase 1 (conceive)

- Customers interview
- Road mapping

Develop :

- Make timelines and write our features
- User stories , specs , estimations on very specific details
- Setting the requirement

Iterate :

- We finish the MVP or early prototype
- We test the assumptions that we have made
- We use tools for testing different versions of the product

Launch :

- Working with the marketing team , the legal team , the PR Team , sales team , and position the product for public
- We got it and see what reaction we got

Steady state :

- Collecting matric and optimizing them
- Sales continue

Maintain or kill :

- Analyzing the data : how competitive the product is , what is the return of investment
- We decide if we kill it or maintain it
- Even if it produces , it could not just fit the company's vision anymore

This is a natural process and every product goes through these phases

Explaining the lean framework and the lean mindset :

The lean framework is a product development philosophy that resolves around cutting all the unnecessary work or effort until we're absolutely sure .

Example : creating a food delivery app

Normally , you would hire drivers, buy a cell phone number and build the actual app
The lean way of doing everything yourself in the beginning , trying to get as far as you can by using the least amount of resources .

Being lean means we are not building anything until you know for sure that there is an interest in it .

The main sources of gathering ideas as product Manager :

Any company you will work for as a PM will probably have a long list of ideas that need to be developed . but where do we get new ideas from?

Ideas comes from 4 main place **E.M.U.C**

- Employees – coworkers, management , and yourself
- Metrics – problems and inefficiencies you find when you’re looking into how users use your product
- Users – user feedback from forums , emails , social media
- Clients – this applies primary to business to business product manager

Depending on your PM role, ideas might come from different sources :

- | | |
|---------------------------|------------------------------|
| ✓ Internal PM | - Stakeholders |
| ✓ Business to consumer PM | – Users, metrics , coworkers |
| ✓ Business to business PM | – employees, clients |

Figuring out if you are actually solving a real problem

Once you have a list of ideas , you don’t just go out and build them

A big component of the product manager mindset is being able to understand the real problems behind what people ask you to build

If you give people what they want , you’re not always solving the actual core problem

Being a product manager is all about finding a solution to a problem , instead of trying to fit the problem to a solution

The difference between users and customers:

Sometimes , the people who pay for your product (customers) are not the same people that use it (users)

There is a different kind of feedback that we will get from each category :

- The company that buys the product will give us feedback about general features that they need it to have .
- The actual users will give you feedback about technical issues they encounter while actually using the product

How to figure out the size of the market that we are getting into :

There are 2 common approaches to think about the market size :

- TOP DOWN
 - Based on finding the total market and then estimating what your share of that market is
 - It's a more optimistic approach
- BOTTOM UP
 - Based on thinking about the current sales of similar product and estimating how much of those sales you can capture
 - It's a more conservative approach
 - This is the best way to do it but it takes more effort and time

What you need to learn before starting to search for competitors :

We need to know how to collect information on our competitor and make a judgement on what that means for our product

If we go into a market with a lot of competitors , we need to analyze them before tackling that opportunity

If we go into a market that seems to have no competitors , we have to know what is the reason for that – there might be no customer demand , or maybe we actually have a brilliant idea

As a product manager , we are in charge of feature triage

The features you choose to build have to :

- Get our more users
- Make your user happy
- Enhance your brand

We cant make decisions until you know what your competitors look like , what they are doing , and what they currently offer

Finding competitors as a Product Manager:

The main methods used to search for competitors :

The most important thing is capture. We have to record every competitor we find .List our competitor under 2 categories:

1. KNOWN

- If you work in a company , we should already know who your biggest competitors are
- If we don't know , search Google for “ [your company name] versus”

2. UNKNOWN

- These are competitors that might not be that obvious
- In order to find them , find we have to figure out what problem your product solves and for whom
- Use the following 3 technique to find them on Google :
 - a) Channel the type of user
How exactly would the user complain about his problem?
Google these exact complaints
You will find – Companies that are using verbiage
Individual complaints online
Google connects the dots , so we might find competitors
 - b) Search for “ site : [popular website]” and your search team
Popular websites : Reddit , Quora , Yahoo Answer
Describe what your product does and search for that
We will find – Companies using literal descriptions
Ads at the top of the search list
Those could be paid by competitors
Google input
 - c) Search for exact phrases using quotation marks
Search for that exact phrase

Difference between four main type of competitors :

There are four types of competitors :

1. Direct
 - They're going after the same customer group as you
 - They're solving the same problem as you
 - Customers have to make a decision between you and them
2. Indirect
 - They solve the same problem as you , but in a different way
 - They have a different target customer group , but which might overlap with ours
3. Potential
 - They offer something to the same target customer group
 - They don't address the problem as you
 - They are also called “ peripheral competitors”
4. Substitute
 - Solve the same core problem
 - They're not angled and delivered the same way at all
 - They don't generally target the same people
 - Customer could substitute our product with their

The 5 Criteria for Understanding Competitors :

Explaining the five dimensions we should compare ourself with our competitors:

1. The product core
2. The size of their userbase
3. Design
4. Brand
5. Speed

1. THE PRODUCT CORE :

- Who is in charge of making the product ?
- How good is our competitor's product team ?

2. THE SIZE OF THEIR USERBASE :

- Having a larger base has certain advantages :
- Anytime, they launch a new feature , they can dominate the market
- They have an easier time getting press coverage
- It allows them to strike deals with other companies more easily
- The larger the company , the better the product

3. DESIGN :

- How good is the competitor's ability to make products that have a great design?

4. BRAND :

- How highly regarded is the brand of your company ?
- Having a strong brand is a huge competitive advantage
- Strong brands demands a higher level of customer loyalty can charge higger price ,and they get the benefit of the doubt

5. SPEED :

- How quickly can they make changes ?
- As a company gets larger , they gets slowed down

What's Feature table?

The feature table is a comparison chart we use to compare our product to our competitors product on a list of dimensions
we need to know how competitive we are before we launch our product

we don't necessarily need to make a feature table, but it's the best way to compare ourselves to others .

Monitoring our competitors :

How to keep track of the changes that happens with your competitors :

- We need to keep track on our competitors in order to continuously adapt to the market
- Keep an eye on the 5 criteria for understanding competitors
- There are 3 events that we should be looking for :
 1. Funding
 2. Acquisitions
 3. New features or new product launches

Customer Development :

- Customer development is one of the most important tools that PM uses to find out if they're building the right thing
- Customer development is the practice of establishing a continuous and iterative communication line with your customer , so that we can come up with ideas , hypothesis, try them out , get feedback , and adapt your product accordingly
- Customer development is a structure developed by Steve Blank
- In this framework there are 4 steps in the product life cycle : Discovery , validation, creation , and building
- We're focusing on the customer interview customer interviews help us to understand the reasons why customers buy or don't buy your product
- **CUSTOMER DEVELOPMENT CYCLE :**

1. Validation:

In this phase , we can customer interview to figure out if your products is needed and if it solves a real problem

2. Development of the first version:

- In this phase , you can see customer interview to figure out what features should build

3. Iteration:

- In this phase, we can improve the product
- We can use customer interview to figure out if they are enjoying the product , who is getting the most out of it, what you are missing , what new features it might need

4 Types of Interviews :

1. Exploratory Interview
2. Validation Interview
3. Satisfaction oriented interview
4. Efficiency Interview

Key differences in Customer Development :

- How to approach customer development depending on the stage we are in :
- Customer development evolves throughout the life cycle of the product
- We use the same guiding principles for customers development , but the differences in the type of information we need to gather
- Pre- product
 - Potential customers
 - They don't know us
 - Harder to reach
 - Focus on pain points and validation
- Post- product
 - Existing customers
 - They know us
 - Easier to reach
 - Focus on satisfaction , usability , pain points

Finding interviewees externally:

Where to find people to interview when you are in **Pre- product** phase :

1. LinkedIn :

- Works if our target customers are defined by a certain job, location , or educations
- Search for the specific job you target
- The result include your connections and your connections

2. Forums :

- These are where people talk about their interests or their problems
- Reddit.com
- Quora.com

3. Twitter :

- People are self -identifying with things they like and they complain about what they don't like
- Search for phrases people might be saying
- Contact the ones who match your target group

4. Your competitors:

- Go to their social media pages and see who is engaging in conversations there
- See who is commenting on their blog
- Contact the most active people

Where to find people to interview when you are in **Pre- product** phase :

1. Use company live chat system

- Example : olark , intercom.io

2. Our own blog

- Look at the people who are commenting

3. Power users :

- These are people who used our product frequently , or buying things , often , sending messages often

4. Twitter :

- Look at who is tweeting at our , replying , or sharing our post
- It will be easier to get these people to talk

Practice writing Emails:

1. Introduction : 1-2 sentences (personal)

- Say where you found them and mention the problem you notices

2. Two sentence about what we want to talk

- Say we want to solve their problem and we need their help in order to do that

3. One sentence scheduling a time

- Are you available to talk on Wednesday
- Its easier if we propose a specific time

The Product Manager & the data diet:

How to make sure that we gather enough information

- You cant make product decisions based on only one single source of information , because we risk building the wrong product
- Sources of information you will use :
 - Internal feedback
 - User test data
 - Online feedback
 - Analytics stats
 - News
 - Market trends
 - Watching competitors

What is a MVP ?

The definition of an MVP and what we use it :

MVP = Minimum Viable Product

The term “MVP” was first introduced in “the lean startup Framework” by Eric Ries

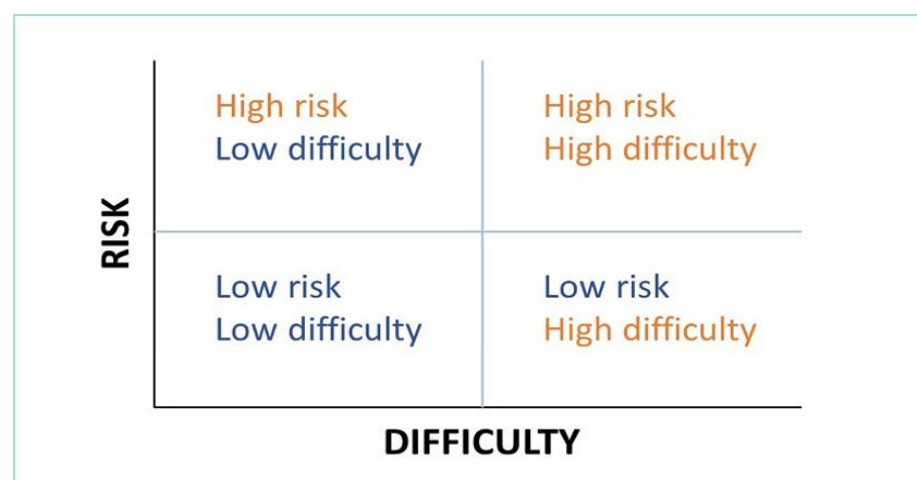
“a Minimum Viable Product is that version of a new product which allows a team to collect the maximum amount of validated learning about customers with the least efforts”

- 7 steps of the MVP process
- 1. Figuring out what our problems / solution set is
- 2. Identifying our assumptions and find the riskiest
- 3. Building testable hypothesis around our assumptions
- 4. Establishing our minimum criteria for success
- 5. Picking what type of MVP we are going to run and our strategy
- 6. Executing the MVP Experiment
- 7. Evaluating and learning from the experiment

Risk/ Difficulty Square :

Prioritizing what we test according to the degree of risk and difficulty :

- Large companies have to prioritize what assumptions to test, depending on their degree of risk and difficulty
- Risk: how risky the assumptions are to the company or product
- Difficulty : how much effort we need to make to test the assumptions
- Usually, these characteristics can be drawn in a table



What is Hypothesis ?

A hypothesis is a single , written , testable statement of what we believe to be true ,with regards to the assumptions that we have identified .

Having a hypothesis that we are trying to prove true is part of running any scientific experiment

Using the HEART Metrics framework :

The meaning of HEART

1. Happiness
2. Engagement
3. Adoption
4. Retention
5. Task success

Happiness - How happy is your user?

Engagement - How engaged is your user in the short term?

Adoption - How many interested users have actually tried your product?

Retention - How many users do you retain long term?

Task Success - How successful are you at allowing users to perform the most valuable task?

	Goals	Signals	Metrics
Happiness	Maximize drinker satisfaction with our spiked lemonade and the delivery service	- App store rating - Scores from the NPS survey sent to customers	- App store rating change, month over month % of perfect 10 NPS scores
Engagement	Maximize # of orders and total value of the orders (through add-ons like additional shots in the lemonade or extra fast delivery)	# of orders per customer - Order value in dollars per customer	- Average order value in dollars per day - Average # of orders per day per user
Adoption	Maximize the # of people who order at least 1 glass of spiked lemonade	# of users who order at least 1 glass of spiked lemonade # of users that have downloaded and opened the app	% of new users -> customers (# of new users that order divided by the # of people that have opened the app to get a percentage)
Retention	Maximize the % of users that return and place a repeat order <u>on a monthly basis</u>	People that order spiked lemonade	Retained users (# of people ordering this month divided by the # of those same people that ordered last month to get a percentage)
Task Success	- Minimize # of "abandoned carts" (people that don't complete purchase) - Maximize the # of users that successfully complete an order within 5 minutes	- Incomplete orders - Time taken to place each order, from app start to "success" screen	- Average time to checkout % of orders incomplete per month

Roadmapping :

- Every company does roadmapping differently
- Roadmaps are usually inaccurate , but they are good to have a general guide
- Why do companies do roadmapping ?
 1. Executive and investors like to see quarter-bases maps
 2. We could be against an actual deadline
 - The alternative is to sort things depending on priorities
 - This method keeps everyone in line but doesn't impose strict deadlines

Prioritization :

Prioritization method that we can use as PM

- As a product manager, prioritization thing is a major part of our role
- Prioritization method
 1. Assumption testing
 2. The Buc Method :

Business benefit

User benefit

Cost

3. The MOSCOW method:

Must

Could

Should

Would

 General Communication Skills :

- General advice on communicating with people in our company

1. Meeting :

Learn to take advantage of meetings

2. Conference calls :

Make sure that you have the right intonation and that you deliver a clear message

3. Emails :

Ensure that we are writing clear, concise messages , accompanied by right resources and date that you refer to

4. Informal meeting :

These are great for connecting , getting feedback , ideas , and working to build support .

 Why learn Technology?

- Reasons we should learn technology as a PM
- As a PM , we don't need to know how to code, but we need to understand how the most common technologies work
- **Reasons to learn technology :**
 1. We will know what can be realistically build
 2. It helps us to understand the impact of the decision that we are making

 Branding Yourself :

How to create a strong online personal brand

- Having a good personal brand online will help us getting the job
- The best way to demonstrate credibility is to have a website or blog where we talk about PM and where we post our side projects
- Its very important that you have a public social media account where we can interact with our readers
- We can go on Quora.com and ask or answer questions related to product and product strategy

OUTCOME OF COURSE : Certificate



SKILL ATTAINED :

- Understand the varying role of product Manager through different types and sizes of companies
- Decide which type of product manager best fits ones goal and personality
- Understand the product lifecycle and how it applies to every product
- Understand how to get all the root of customer pain points
- Understand and communicate about customer pain by type and frequency
- Find and compare competitors and competing products
- Differentiate between Direct, Indirect , Substitute and potential competitors
- Understand the process of Customer development and how it related to being a product Manager
- Write emails that will get users and potential customers to responds
- Run a variety MVP Experiments , such as pitch experiments , redirect , shadows buttons , and more
- Correctly evaluate witch product metrics to tract and which to ignore
- Apply the HEART Framework to your product
- Tract your metrics using a variety of software
- Create a product and feature roadmap
- Create a product backlog and properly prioritize features
- Learn software development concepts like APIs
- Communicate effectively with all the stakeholders of a product
- Understand the basics of APIs , what they do, what they look like and how our team might use them
- How to self -brand online and build a following pre-hire
- What to look for in Product Management jobs and what to ignore
- How to apply insider tips and tricks to get hired as a product manager
- Craft resume that appeals to a hiring manager for product Management placement
- Excel beyond getting hired .

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