

The Effects of Social Media Marketing on Pharmaceutical Industry in Hyderabad

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ABSTRACT

Background: Social media marketing has become an increasingly popular tool for pharmaceutical companies to build brand awareness, educate patients and healthcare providers, and share important health information. **Objectives:** In this paper, the main target consumer groups—doctors, chemists, and patients—in Hyderabad are examined in terms of their perceptions, attitudes, and behaviors towards social media marketing. Analyzing the presence of significant pharmaceutical companies on social networks. This article looks at the fundamental problems that social media marketing for the pharmaceutical industry is facing.

Methodology: This study was a cross-sectional survey carried out in an urban area of Hyderabad, a metropolis in the state of Telangana, India. The chosen sampling technique was convenience sampling, and survey participants were chosen based on their availability and willingness to participate. The sample size was determined to be 150-200, and 160 responses were collected. Data were analyzed using statistical analysis. The databases searched included PubMed, Medline, Google Scholar, and several Indian research journals.

Results: The pharmaceutical industry has been slow to adopt social media due to regulatory concerns and uncertainty around how to effectively use these platforms. Pharmaceutical companies could benefit from using social media marketing as a method to connect with patients and medical professionals. However, pharmaceutical companies must be careful to balance promotional messaging with informative content to increase the acceptance quotient among various age group with respect to social media marketing and to comply with regulations and protect patient privacy when using social media.

Conclusion: Social media marketing has become an important tool for pharmaceutical companies. Doctor-oriented campaigns focus on promoting products to physicians, patient-oriented campaigns aim to raise awareness of specific conditions, and pharmacist-oriented campaigns provide information and resources to pharmacists.

KEYWORDS: Social media, Marketing, Online pharmaceutical services, Channels.

JEL classification: M31, M14, I11

INTRODUCTION

The pharmaceutical industry is a highly regulated industry that faces unique challenges in marketing and advertising their products. In recent years, the emergence of social media platforms has created new opportunities for pharmaceutical companies to connect with customers, healthcare professionals, and other stakeholders.

Social media marketing has become an increasingly popular tool for pharmaceutical

companies to build brand awareness, educate patients and healthcare providers, and share important health information. However, due to the highly regulated nature of the industry, pharmaceutical companies must navigate strict regulations and guidelines set by regulatory bodies, such as the Food and Drug Administration (FDA).

The FDA has issued specific guidelines for pharmaceutical companies engaging in social media marketing, which include requirements for accurate and truthful information, disclosure of risks, and clear identification of promotional content. These regulations create a challenge for pharmaceutical companies as they try to balance their marketing goals with compliance requirements. Despite these challenges, many pharmaceutical companies have found success in social media marketing. Studies have demonstrated that social media marketing is a powerful tool for promoting health-related goods and services, especially when it is utilized to inform consumers and healthcare professionals about illnesses, treatments, and technological advancements.

Pharmaceutical firms need to be able to successfully manage the legal environment and use social media for marketing as it continues to develop and become a bigger part of our lives. Therefore, research on social media marketing in the pharmaceutical industry is critical to understanding the opportunities and challenges that exist in this space.

LITERATURE REVIEW

Pharmaceutical companies have increasingly turned to social media as a means of marketing their products. This review of literature will examine the categories of pharmaceutical social media marketing with respect to doctor, patient, and pharmacist- oriented campaigns.

- 1) **Doctor-Oriented Social Media Marketing:** Promoting pharmaceutical items to physicians is one of the main objectives of doctor- focused social media marketing. Social networking websites like Twitter, LinkedIn, and Facebook are good places to do this. According to a survey, Twitter is the most often used medium for social media marketing that targets doctors. (*George et al., 2017*). Doctor-oriented social media campaigns typically involve sharing clinical trial results, new product launches, and other product-related information that may be relevant to physicians (*Grundmann & Parry, 2021*).
- 2) **Patient-Oriented Social Media Marketing:** Pharmaceutical companies have also utilized social media to market directly to patients. Patient-oriented social media campaigns are designed to raise awareness of specific conditions, promote healthy lifestyles, and encourage patient engagement. Such campaigns may involve patient testimonials, disease awareness messages, and interactive online communities. Social media platforms such as Facebook and Instagram have been used to promote patient-oriented campaigns (*George et al., 2017*).
- 3) **Pharmacist-Oriented Social Media Marketing:** Pharmacist-oriented social media campaigns focus on providing information and resources to pharmacists. These campaigns may include continuing education courses, updates on new products, and information on drug interactions. Social media channels such as Twitter and LinkedIn is commonly used to reach pharmacists (*Grundmann & Parry, 2021*). Pharmaceutical companies are increasingly utilizing social media platforms to market their products, as it has become an effective tool for engaging with customers, creating brand awareness, and providing information about medications. The different categories of pharmaceutical social media marketing and their effectiveness.

Different categories of Pharmaceutical Social Media Marketing:

- a) **Disease Awareness Campaigns:** Disease awareness campaigns are one of the most common types of pharmaceutical social media marketing. These campaigns aim to create awareness about a particular disease or condition and its symptoms, causes, and treatment options. The primary goal of these campaigns is to educate and inform patients about the disease and its available treatments. Such campaigns are often initiated by pharmaceutical companies to increase public awareness and promote their products (*Lyles, W., & Luan, J. 2017*).
- b) **Product Promotion:** Pharmaceutical companies also use social media platforms to promote their products to healthcare professionals and patients. Product promotion on social media involves the use of creative and engaging content to increase brand awareness and encourage consumers to buy their products. Companies use sponsored posts and targeted ads to reach a broader audience, and they often collaborate with influencers to promote their products on social media platforms (*Nguyen, T., & Gupta, S. 2018*).
- c) **Patient Education:** Patient education is another essential category of PSMM. Pharmaceutical companies use social platforms to educate patients about their medications, including information on dosages, side effects, and how to take the medication. By providing accurate and reliable information, pharmaceutical companies can improve patient outcomes and promote the safe and effective use of their products (*van der Vaart, R., et al. 2015*).
- d) **Corporate Social Responsibility:** Pharmaceutical companies also use social media platforms to promote their corporate social responsibility (CSR) initiatives. CSR initiatives involve promoting sustainable practices, reducing environmental impact, and engaging in philanthropic activities. By sharing information about their CSR initiatives, companies can improve their brand reputation and build trust with their consumers (*Stuart, B., & Stock, S. 2017*).

Effectiveness of PSMM

PSMM has proven to be an effective technique for engaging with target audience and promoting products. Studies have shown that social media campaigns can increase brand awareness, influence patient behavior, and improve medication adherence (*Parker, C., & Chen, M. 2017*).

However, there are also some concerns about the potential risks associated with pharmaceutical social media marketing. There is a risk of misinformation and the spread of incorrect medical information, which can harm patients. Additionally, pharmaceutical companies must ensure that their social media marketing complies with regulatory guidelines and ethical standards (*Mackey, T. K., & Nayyar, G. 2018*).

Despite these challenges, there is growing evidence that the impact of SMM can be an effective tool for pharmaceutical companies to engage with healthcare professionals and patients. For example, a study by PricewaterhouseCoopers found that 57% of healthcare professionals use social media for professional purposes, and 46% of consumers use social media to learn about medical conditions and treatments (*PwC, 2018*).

Other research has highlighted the potential benefits of SMM in the pharmaceutical industry, such as increased brand awareness, improved customer engagement, and greater access to real-time feedback from patients and healthcare professionals (*Patel et al., 2020; Sivaraman and Patel, 2019*). For instance, research by the drugmaker Pfizer revealed that social media

marketing might be a useful tool for connecting with patients and medical professionals. The study found that social media was particularly useful for building awareness of a new product or treatment, providing patient education, and building relationships with patients (Kapoor and Khan, 2018).

OBJECTIVES

This thesis seeks to comprehend the perception, attitudes and behaviour of the key target consumer groups such as doctors, pharmacist and patients in Hyderabad, regarding social media marketing. To examines the main issues that social media marketing facing for the pharmaceutical sector, assessing the presence of major pharmaceutical firms on social platforms like Facebook, Twitter, and YouTube, and describing their digital engagement tactics.

METHODOLOGY

This study was a cross-sectional survey carried out in an urban area of Hyderabad, a metropolis in the state of Telangana, India. The sampling technique used was convenience sampling, where participants were selected based on their availability and willingness to participate in the survey. The sample size was determined to be 150-200, and 160 responses were collected. The list of doctors, pharmacists practicing in urban Hyderabad. The list was obtained from the relevant professional associations, online directories, and hospital records. Data collection was done through a self-administered questionnaire. The questionnaire was designed to collect information on the participants' demographic characteristics, socioeconomic data; data regarding awareness of social media marketing; data regarding influence of social media marketing on the behaviour and practices of the doctors, pharmacist and patients; and data regarding acceptance of and expectations from social media marketing. The questionnaire was distributed through email and online survey.

The collected data was analysed using descriptive statistics, such as frequencies and percentage, Chi-square test was used with the help of Excel.

DATA ANALYSIS

Table 1. Profile of the Sample

Gender	Male	86 (54%)
	Female	74 (46%)
	Total	160
Age (year)	18-24	22 (14%)
	25-34	72 (45%)
	35-44	42 (26%)
	45-54	22 (14%)
	55 or older	2 (1%)
	Total	160
Qualification	MBBS or MBBS + MD/MS (Doctor)	44 (28%)
	D pharmacy/B pharmacy (Pharmacist)	50 (31%)
	Graduate/post Graduate (Patient)	66 (41%)
	Total	160

Amongst the 160 responses, 71% were between 25 to 44 years age group, 41% had a graduation/ post-graduation degree.

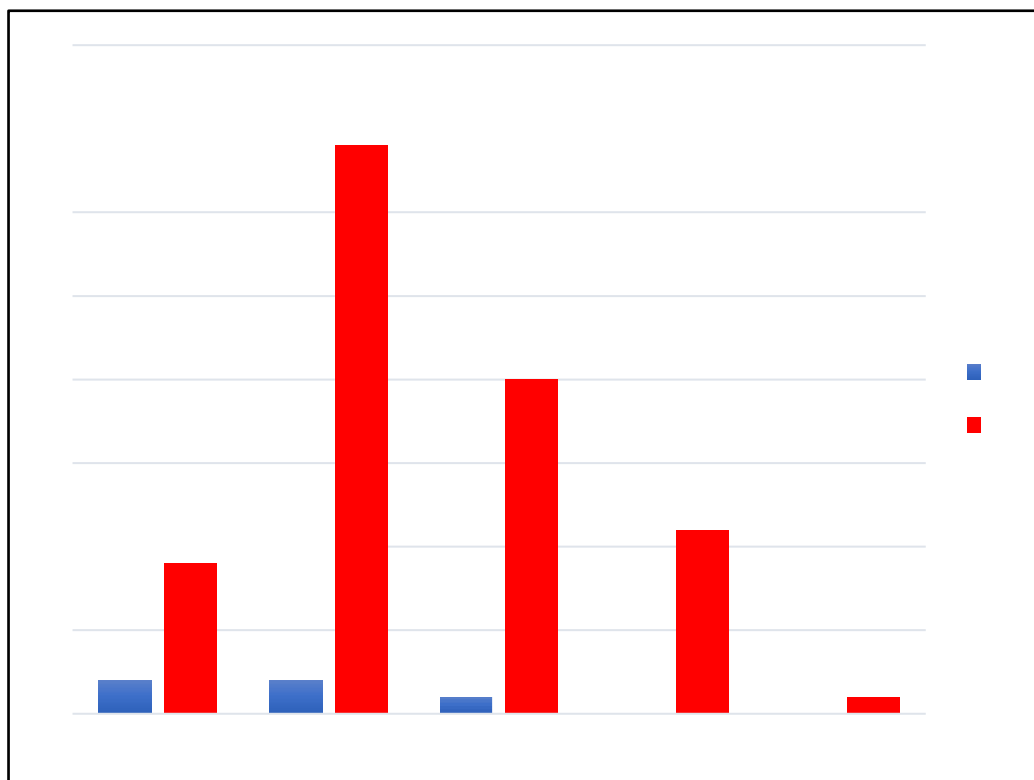


Figure 1. Use of social media with respect to age

Majority of respondent uses social media and the highest rate of usage was found among the age between 25 to 44. These individuals are actively seeking information related to health and medical products, and are using a variety of social media platforms to gather this information.

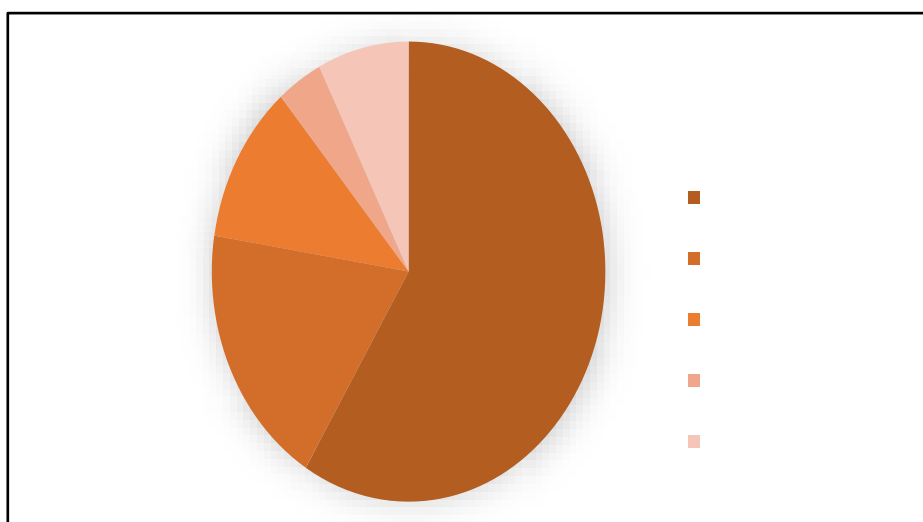


Figure 2. Social Media Platform Used

All (59%) the platforms are most widely used for gathering the information related to pharmaceutical product but majorly facebook (19%) and (11%) linkedin is considered as most used.

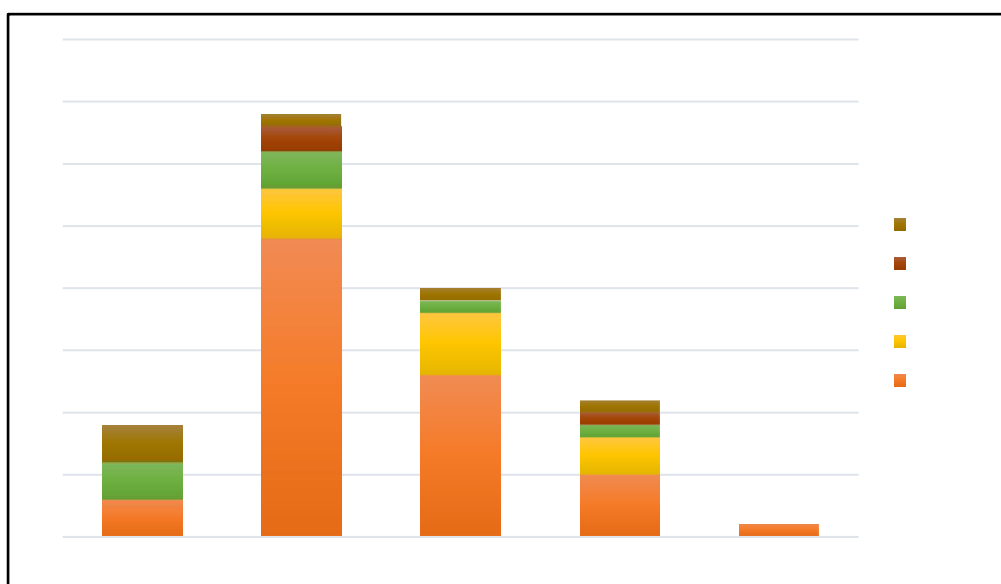


Figure 3. Social media Platforms mostly used by different age groups

From the **Figure 3** The age group between 25 and 44 has been found to be the most active on social media platforms. This is important for the pharmaceutical industry as this demographic includes a large number of patients and healthcare professionals who are actively seeking information related to health and medical products. These individuals are actively seeking information related to health and medical products, and are using a variety of social media platforms to gather this information.

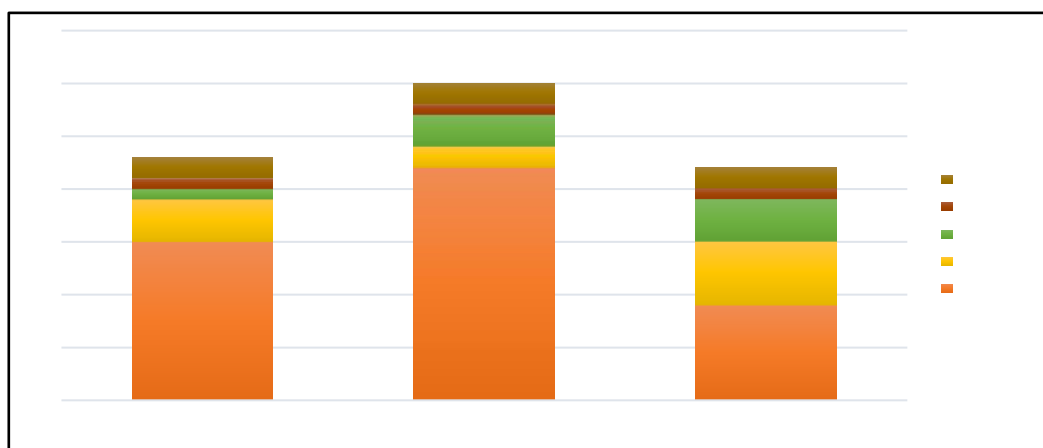


Figure 4. Social Media Platforms mostly used by different stakeholder

Pharmacists and doctors are important stakeholders in the pharmaceutical industry as they play a crucial role in ensuring patient safety and providing medical advice. The use of social media platforms, particularly Facebook, has become increasingly popular among these stakeholders for gathering and validating information related to pharmaceutical products. Overall, all other social media platforms are also valuable tools for pharmacists and doctors to gather and validate information related to pharmaceutical products. The use of these platforms has the potential to improve patient outcomes by enabling healthcare professionals to make informed decisions and provide high-quality care.

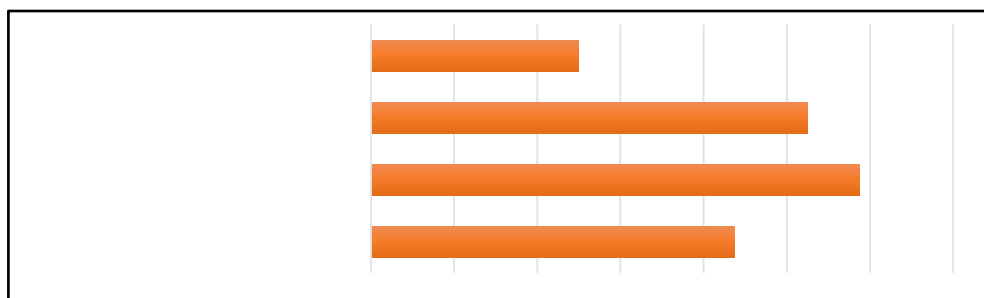


Figure 5. Engaging content on pharmaceutical social media pages

Product information (59%) and testimonial and reviews (53%) are considered to be most engaging content on pharmaceutical social media pages

Table 2. Reasons Cited for Benefits and Challenges of Social Media Marketing

Benefits	N= 160	Challenges	N= 160
Increased awareness about products	116 (73%)	Maintaining regulatory compliance	76 (48%)
Better engagement with customers	66 (41%)	Balancing promotional messaging with informative content	84 (53%)
Improved patient education	54 (34%)	Engaging with a diverse audience	62 (39%)
Better patient outcomes	40 (25%)	Creating relevant content	58 (36%)

*Percentages do not add up to 100% because it was a multiple response question

Most important benefit for social media marketing in pharmaceutical marketing is to increase the awareness about the product (73%) as well as creating the better engagement with customer (41%) as per study whereas major challenges for pharmaceutical companies while doing social media marketing is to balance promotional messaging with informative content (53%) by maintaining regulatory compliance (48%)

Table 3. Purchase of pharmaceutical product based on their social media content

		Yes	No	Total	P value
1. Gender	Female	28	46	74	0.0001
	Male	46	40	86	
	Total	74 (46%)	86 (54%)	160 (100%)	
2. Age	18-24	10	12	22	0.0740**
	25-34	26	46	72	
	35-44	26	16	42	
	45-54	12	10	22	
	55 or older		2	2	
	Total	74 (46%)	86 (54%)	160 (100%)	
3. Profession	(Doctor) MBBS or MBBS + MD/MS	24	20	44	

	(Pharmacist) D pharmacy/B pharmacy	32	18	50	0.0018
	(Patient) Graduate/post Graduate	18	48	66	
	Total	74 (46%)	86 (54%)	160 (100%)	

*** Chi values were calculated by grouping the respondents age – less than 35 and more than 35, and then using two by two tables*

H01: There is no significant association between Gender and Purchase of the product based on pharmaceutical companies' social media content. As p value for the chi square test is less than 0.05, we reject the null hypothesis that there is no significant association between Age and Purchase of the Pharmaceutical product based on pharmaceutical companies' social media content. Purchasing behaviour of the pharmaceutical product is associated with Gender as 46 male respondents out of 74 are shows their reliability on social media content and purchase the pharmaceutical product.

H02: There is no significant association between Age and Purchase of the product based on pharmaceutical companies' social media content. A majority (54%) of respondent considering the age group do not prefer purchasing any pharmaceutical product based social media content whereas 46% of them were in favour of purchasing pharmaceutical product based on social media content. As p value for the chi square test is more than 0.05, we accept the null hypothesis that there is no significant association between Age and Purchase of the Pharmaceutical product based on pharmaceutical companies' social media content

H03: There is no significant association between Profession and Purchase of the pharmaceutical product based on pharmaceutical companies' social media content As p value for the chi square test is less than 0.05 we reject the null hypothesis, There is significant association between Profession and Purchase of the Pharmaceutical product based on pharmaceutical companies' social media content.

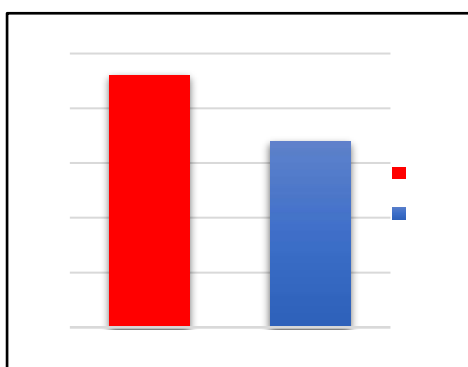


Figure 6. Use of social media

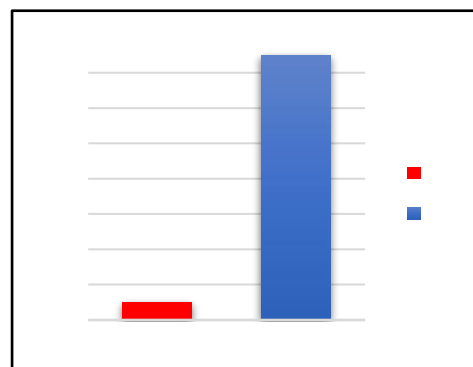


Fig. 7. Recommendation of product based on PSSM

93% of Respondents use social media out of those 42% of respondent finds social media content useful and reliable to recommend the pharmaceutical product on the bases of social media marketing

Table 4: Use of social media platforms to learn about pharmaceutical products

4. Use of social media platforms to learn about pharmaceutical products					
Profession		Yes	No	Total	P Value
	(Doctor) MBBS or MBBS + MD/MS	44		44	0.8522
	(Pharmacist) D pharmacy/B pharmacy	46	4	50	
	(Patient) Graduate/post Graduate	60	6	66	
	Total	150	10	160	
5. Recommendation of a pharmaceutical product based on social media marketing					
Profession		Yes	No	Total	P Value
	(Doctor) MBBS or MBBS + MD/MS	28	16	44	0.1899
	(Pharmacist) D pharmacy/B pharmacy	32	18	50	
	(Patient) Graduate/post Graduate	54	12	66	
	Total	114	46	160	

H04: There is no significant association between Profession and use of social media platforms to learn about pharmaceutical products. There may be some differences in social media use among healthcare professionals, profession does not appear to be a significant factor in the use of social media platforms to learn about pharmaceutical products. As p value for the chi square test is more than 0.05 we accept the null hypothesis, i.e. There is no significant association between Profession and use of social media platforms to learn about pharmaceutical products.

H05: There is no significant association between Profession and Recommendation of a pharmaceutical product based on social media marketing. As p value for the chi square test is more than 0.05 we accept the null hypothesis, i.e. There is no significant association between Profession and Recommendation of a pharmaceutical product based on social media marketing.

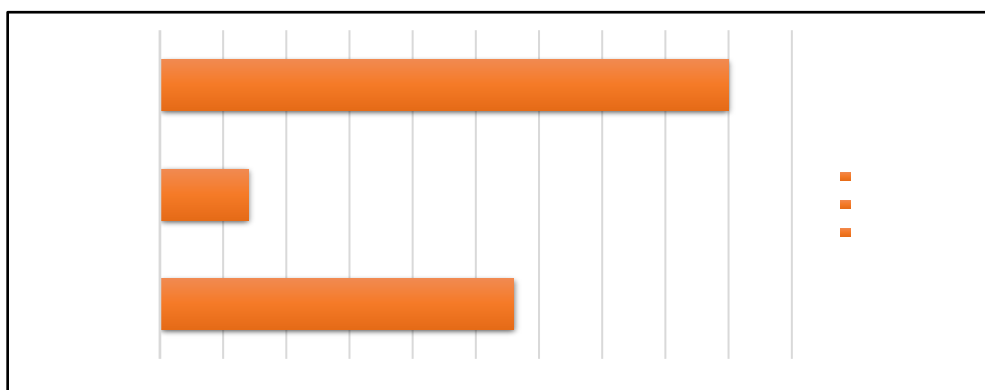


Figure 7. Importance of Transparency by Pharmaceutical companies

Transparency in marketing is a strategy to encourage customers to contact your brand by following the brand's faces and development closely. Through a transparency strategy on social media, the more information you give to your customers, the more trust you build toward your brand out of 56% of respondent consider social media marketing transparency by pharmaceutical companies is very important.

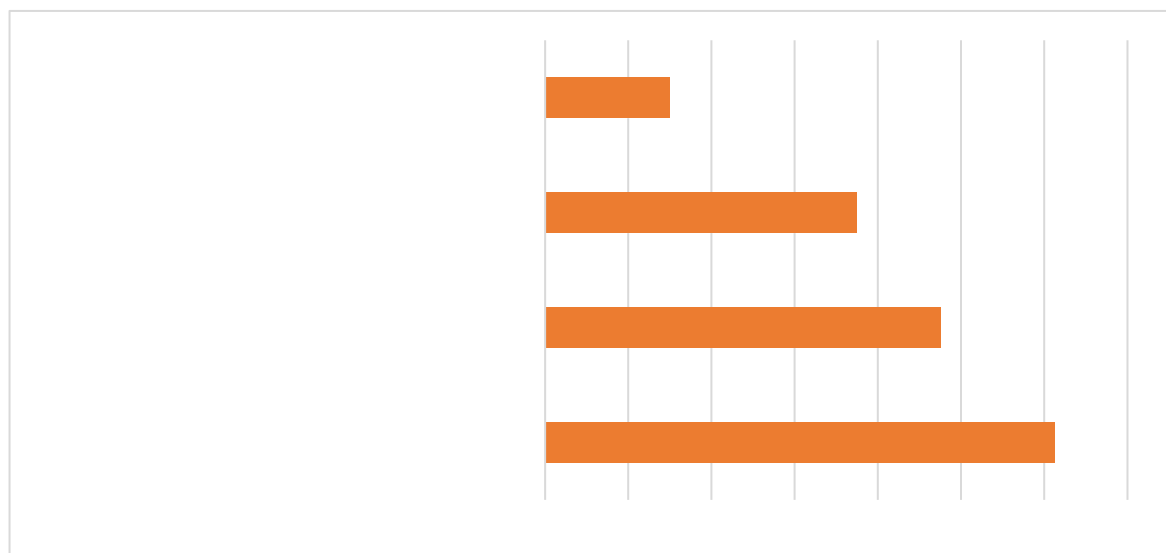


Figure 8. Reason cited for pharmaceutical companies can balance the need to promote their products on social media while also providing accurate and informative content

Reason cited to increase the reliability and trust of targeted audience are clearly distinguish promotional content from informative content (61%), provide comprehensive information about the product (48%), collaboration with medical professional to provide credible information (38%) and offer resources for further information (15%).

DISCUSSIONS AND RESULTS

The impact of social media marketing on the pharmaceutical industry is a topic that has been extensively studied in recent years. The use of social media by pharmaceutical companies have become increasingly popular as a means to reach out to patients, healthcare providers, and other stakeholders. A cross-sectional survey carried out in an urban area of Hyderabad, a metropolis in the state of Telangana, India.

The sampling technique used was convenience sampling, where participants were selected based on their availability and willingness to participate in the survey. The sample size was determined to be 150-200, and 160 responses were collected. The Targeted audience were Doctor, Pharmacist and Patient with qualification MBBS or MBBS + MD/MS, D pharmacy/B pharmacy and Graduate/Post Graduate respectively. Among them 54% were male and 46% were female majorly were from 25-44 age group i.e 71%. Chi square test was performed considering age and the purchasing decision of pharmaceutical product based on social media marketing and it shows that even there is huge use of social media from the age group 25-44 still people do not purchase any pharmaceutical product based on the social media marketing due to reliability issues and adverse effects of the product.

Chi square test was also performed to see the purchasing decision related to pharmaceutical product by different stakeholder. The result for the test states that there is significant

relationship between purchasing decision of the product and profession. 93% of respondent uses social media out of it only 43% of respondent are willing to recommend pharmaceutical product based on social media marketing and 57% respondent are not willing to recommend the pharmaceutical product based on social media marketing due unbalancing promotional messaging with informative content on social media platform as well as lack of transparency with respect to the product by pharmaceutical firms. Reason cited to increase the reliability and trust of targeted audience are clearly distinguishing promotional content from informative content (61%), provide comprehensive information about the product (48%), collaboration with medical professional to provide credible information (38%) and offer resources for further information (15%).

The discussion surrounding this topic can be broken down into several key points.

Firstly, social media marketing has the potential to improve patient engagement and education. Patients are increasingly turning to social media platforms for health information, and pharmaceutical companies can use social media to provide educational resources, news, and information about health conditions and treatments. From the study most used social media are to be Facebook, YouTube, Twitter and LinkedIn among all 19% of responded consider Facebook is most go to platform for the search of information related to pharmaceutical product. By providing valuable content, pharmaceutical companies can build trust and establish themselves as thought leaders in their respective fields.

Secondly, social media marketing can help pharmaceutical companies build stronger relationships with healthcare providers. By providing access to clinical data, drug information, and other resources, social media can help healthcare providers stay up-to-date with the latest developments in the pharmaceutical industry. Pharmaceutical companies can also use social media to engage with healthcare providers, gather feedback, and build stronger relationships. Product information (59%) and testimonial reviews (53%) for the product from the study found to be most engaging component on social media platform. Thirdly, social media marketing can provide pharmaceutical companies with valuable insights into patient needs and preferences. By monitoring social media platforms for conversations and feedback related to a particular brand or product, pharmaceutical companies can gather insights into patient needs and preferences. Social media listening can also be used to track sentiment and monitor for potential issues or adverse events. Fourthly, social media marketing can help pharmaceutical companies increase brand awareness and reach a wider audience. By leveraging paid advertising and influencer marketing strategies, pharmaceutical companies can target patients and healthcare providers with specific messages and promotions. Social media can also be used to drive traffic to company websites and other online resources. Finally, it is important to note that social media marketing in the pharmaceutical industry is not without its challenges. Regulatory constraints, privacy concerns, and the potential for misinformation are all issues that must be carefully considered by pharmaceutical companies. However, with careful planning and execution, social media marketing can provide significant benefits for the pharmaceutical industry and help improve health outcomes for patients. Overall, the impact of social media marketing on the pharmaceutical industry is a complex topic with both benefits and challenges. By leveraging the right strategies and addressing potential concerns, pharmaceutical companies can use social media to build stronger relationships with patients and healthcare providers, gather valuable insights, and improve health outcomes.

Scope for Further Research

Despite the growing interest in social media marketing in the pharmaceutical industry, there are still some research gaps that need to be addressed. Here are some potential areas for further research:

- 1) **Measuring the impact of social media marketing on pharmaceutical sales:** While there is evidence that social media marketing can increase brand awareness and engagement, it is still unclear whether this translates into increased sales for pharmaceutical companies. Future research could explore the link between social media marketing and sales, including the use of data analytics and other quantitative methods.
- 2) **Understanding the ethical and regulatory issues associated with pharmaceutical social media marketing:** Social media platforms are subject to strict regulations regarding the promotion of prescription drugs, and pharmaceutical companies must ensure that their marketing campaigns comply with these regulations. Further research is needed to explore the ethical and regulatory issues associated with pharmaceutical social media marketing, including the potential risks and benefits of these campaigns. Overall, there is still much to learn about the impact of social media marketing in the pharmaceutical industry, and further research is needed to address these important research gaps.

CONCLUSION

Social media marketing has become an important tool for pharmaceutical companies. Doctor-oriented campaigns focus on promoting products to physicians, patient-oriented campaigns aim to raise awareness of specific conditions, and pharmacist-oriented campaigns provide information and resources to pharmacists. The different categories of pharmaceutical social media marketing, including disease awareness campaigns, product promotion, patient education, and corporate social responsibility, have all been shown to be effective. However, it is important that pharmaceutical companies ensure that their social media marketing complies with regulatory guidelines and ethical standards to avoid potential risks. However, the pharmaceutical industry has been slow to adopt social media due to regulatory concerns and uncertainty around how to effectively use these platforms. Social media marketing has the potential to be a valuable tool for pharmaceutical companies to engage with patients and healthcare professionals. However, pharmaceutical companies must be careful to balance promotional messaging with informative content to increase the acceptance quotient among various age group with respect to social media marketing and to comply with regulations and protect patient privacy when using social media. With the right strategy, social media can be an effective way for raising awareness of Product, diseases and new treatments to take the medical professionals into confidence for better patient outcomes.

REFERENCES

- 1) Datta, M., Vohra, S., Gupta, S. (2020). "Social media in the pharmaceutical industry: Regulatory challenges and best practices." *Journal of Business Research*, vol. 118, pp. 579-587.
- 2) Patel, S., Gupta, R., Vig, S. (2020). "Social media marketing in pharmaceutical industry: A review." *Journal of Medical Marketing*, vol. 20, no. 2, pp. 103-109.
- 3) PwC. (2018). "Social media 'likes' healthcare: From marketing to social business." Retrieved from <https://www.pwc.com/us/en/health-industries/top-health-industry-issues/assets/pwc-hri-social-media-likes-healthcare.pdf>
- 4) Sivaraman, V., Patel, D. (2019). "Social media marketing in the pharmaceutical industry: Opportunities, challenges, and strategies." *Journal of Business Research*, vol. 104, pp. 442-

- 451.
- 6) KPMG. (2014). Pharma Social Media Outlook 2014. Retrieved from
- 7) <https://assets.kpmg/content/dam/kpmg/pdf/2014/08/Pharma-Social-Media-Outlook-2014.pdf>
- 8) Novartis. (2013). Connecting patients and families affected by Fabry disease.
- 9) Retrieved from <https://www.novartis.com/stories/patients-families-affected-fabry-disease>
- 10) Allergan. (2012). Ask About My Eye. Retrieved from
- 11) <https://www.prnewswire.com/news-releases/allergan-launches-new-campaign-to-encourage-consumers-to-ask-about-their-eye-care-157630185.html>
- 12) Koo, K., Fickweiler, F., & Senturk, A. (2018). Social media use in the
- 13) pharmaceutical industry: A review of the blogs, Facebook, Twitter, Pinterest, and Instagram. *Sage Open Medicine*, 6, 2050312118809621.
- 14) Turner, L. W., Liang, Y., & Slack, D. (2019). Direct-to-consumer advertising on social media: Pharmaceutical industry oversight and self-regulation. *Journal of Public Policy & Marketing*, 38(4), 455-470.
- 15) Al-Afifi, N. A., Khanfar, N. M., & Almuqbel, M. A. (2020). Social media use by pharmaceutical companies in the Middle East: A review of literature. *Journal of Pharmaceutical Policy and Practice*, 13(1), 10.
- 16) Pew Research Center. (2013). Health Online 2013. Retrieved from <https://www.pewinternet.org/2013/01/15/health-online-2013/>
- 17) Healthcare Communication & Marketing Association. (2014). Social Media and Healthcare Professionalism Survey. Retrieved from <https://www.hcma.org/wp-content/uploads/2017/06/HCMASocialMediaSurveyReport-2014.pdf>
- 18) El Sherif, H. M., & Abdelhak, A. M. (2021). Social media as a marketing tool in pharmaceutical industry. *Journal of Pharmaceutical Health Services Research*, 12(1), 53-57.
- 19) Karwowski, M., & Donohue, J. (2018). Social media marketing in the
- 20) pharmaceutical industry: Opportunities and challenges. *Journal of Medical Marketing: Device, Diagnostic and Pharmaceutical Marketing*, 18(1), 7-13.
- 21) Kepplinger, L. M., Alkhateeb, F. M., Yang, J., & Chen, J. (2022). The use of social media in pharmaceutical marketing and its impact on patient trust. *Journal of*
- 22) *Medical Internet Research*, 24(1), e33121.
- 23) George, D. R., Rovniak, L. S., Kraschnewski, J. L., & Sciamanna, C. N. (2017). Social media use by physicians and patients: a qualitative study of perceptions and practices. *Journal of medical Internet research*, 19(4), e98.
- 24) Grundmann, O., & Parry, R. (2021). Pharma and Social Media: Opportunities and Challenges. In *Pharmaceutical Marketing in the Digital Age* (pp. 135-155).
- 25) Springer, Cham.
- 26) Lyles, W., & Luan, J. (2017). Pharmaceutical digital marketing and social media: a comparison of regulatory guidelines and practical challenges in the US and the EU. *Journal of medical marketing*, 17(4), 247-254.
- 27) Nguyen, T., & Gupta, S. (2018). Pharmaceutical marketing and social media: a systematic review. *Journal of medical marketing*, 18(1), 5-14.
- 28) Parker, C., & Chen, M. (2017). The use of social media in the pharmacy profession. *Research in Social and Administrative Pharmacy*.