Role and Challenges of the Pharmaceutical Sector with the Social Media Marketing Process

Tejashree Kamath¹ ¹Research Scholar, Institute of Management & Commerce, Srinivas University, Mangalore- 575001, India. Orchid ID - 0000-0001-8411-0677

Abstract:-

> Purpose

The primary purpose of this study is to evaluate of role and challenges of pharmaceutical marketing from the perspective of new social media techniques.

> Design/Methodology/Approach

In order to lead the study, the researcher has adopted "primary quantitative data" with the collaboration of "SPSS Software" to make a valuable first-hand and fresh paper.

> Findings

The findings indicate that social media marketing has gained significant popularity in recent years for pharmaceutical marketing.

> Originality/Value

The research explores the collaboration between the pharmaceutical industry and social media platforms.

Paper type Review paper

Keywords:- Pharmaceutical Industry, Social Media Platforms, Functions, Competitiveness, Profits, Innovation, Modern Style, Easy Purchase.

I. INTRODUCTION

In this modern era, with the insurrection of social media techniques, "retail pharmacy production" has become modified a lot. In recent years, the emergence of the internet has changed the way of business as well as the global community (Infante & Mardikaningsih, 2022) [1]. It has been observed that integrating social media platforms has enabled business forms to collaborate and interact with partner organisations (Cartwright, Davies & Archer-Brown, 2021) [2]. It has been found that most of the population across the world is connected to social media techniques and the number is near about 120 million [3]. This present study is focusing on the evaluation of functions associated with the pharmaceutical sector and its progress with social media techniques.

Dr. Prabhakar Neermarga² ²Research Professor, College of Management & Commerce, Srinivas University, Mangalore- 575001, India. Orchid ID - 0000-0002-3185-3853

Objectives of the Study

The research objectives set by the researcher are mentioned below:

- To identify the perspective of using social media techniques in the pharmaceutical marketing process.
- To find out the related issues associated with social media techniques and pharmaceutical marketing to resolve them to make it sustainable.
- To study the ABCD Analysis of the pharmaceutical sectors based on the proposed review study.

➢ Methodology

To prepare the research paper, selecting methods is highly essential and it decides the quality of the research paper. In this research topic, to arrange all the data and information, the researcher has adopted a "*primary quantitative data collection tool*". Quantitative studies depend on systematic strategies for generating knowledge and gain insights (Mohajan, 2018) [4]. This is identified as useful for the researcher as it serves fresh and first-hand data (Thorman et al. 2022) [5]. The process of survey has been done with 50 participants with 11 "close-ended questions". In recent years, online surveys have become an inevitable option for data collection as digital media enables reaching the target population (Schneider & Harknett, 2022) [6]. In addition to that, to make statistical analysis, the researcher has found an "IBM SPSS software" most useful tool, especially for primary numeric data.

In order to control the large size population and manage the structure of the study paper, "positivism research philosophy" has been proved useful. It has been proved also beneficial for this study as it makes the researcher free from the provisions of human interest (HR & Aithal, 2022) [7]. A "descriptive research design" has been used to make it more evaluated and perfectly justified along with an "inductive research approach". A descriptive approach helps to describe the research phenomenon accurately (Atmowardoyo, 2018) [8]. Apart from this, an inductive approach is used for identification of patterns (Walter & Ophir, 2019) [9].

II. RELATED RESEARCH WORK

The following tabular and descriptive style is associated to serve a summary and contrast discussion to present the perspectives.

- A. Descriptive focus
- > Paper 1
- Functions of Pharmaceutical Marketing

In paper 1, the functions of pharmaceutical marketing have been discussed and it has been identified that pharmaceutical marketing is vital for doctors as well as patients. Additionally, doctors and healthcare professionals rely on this information for deciding therapies and making informed medical decisions. Thus, the integration of information and communication technologies has changed the healthcare practices and approaches (Aceto, Persico & Pescapé, 2018) [10].

Pharmaceutical marketing helps to develop effective brand strategies for targeting the ideal customer base and promoting the brand. The main advantage of this marketing is to help pharmaceutical brands to achieve their business goals, enhance profitability however, it faces several regulatory complications regarding safety and digitalisation (Gioumouxouzis, Karavasili & Fatouros, 2019) [11].

The financial obligations and barriers associated with marketing, research and development and clinical trial have been identified to be the main factor influencing price increases in the pharmaceutical industry. Additionally, the main stakeholders associated with pharmaceutical marketing are hospitals, consumers, commercial pharmacies and other healthcare providers. In this regard, this marketing is heavily regulated and optimised which has enhanced price differences (Puetz & Wurm, 2019) [12].

The pharmaceutical sector maintains various activities including the formation of an organisation, manufacturing products, marketing and promotion. The main factors influencing the growth of the pharmaceutical market are decreased amount of tax, decreased drug pricing, emerging GDP, the ageing population and increasing chronic diseases along with the integration of advanced technology in R&D areas (González Peña, López Zavala & Cabral Ruelas, 2021) [13].

• Importance of Using Social Media in Pharmaceutical Marketing

Social media platforms have emerged as among the most vital aspect in recent years and it consists of both negative and positive impacts. Nowadays, the prevalence of chronic diseases has increased rapidly and with the help of social media platforms, people have been more indulged in self-medication practices. The emergence of digital technologies and media has allowed business organisations to communicate more effectively and flexibly (Gruner & Power, 2018) [14].

Social media platforms allow customers to access huge datasets and different social media sites, which has influenced pharmaceutical organisations to promote their products and services through different social media platforms. Consequently, during the recent COVID-19 pandemic, social media platforms have taken an active role for the pharmaceutical industry by encouraging patients to take vaccines (Aloweidi et al. 2021) [15].

Increased use of social media platforms has developed chaos involving medical information, opinion from users and a mess of true and false data associated with the pharmaceutical industry. These aspects have eventually influenced "health-related misinformation" for patients which has affected the reputation and profitability of the pharmaceutical sector also. Therefore, it has become a major change for patients to decide on reliable medication and medical intervention (Chou, Oh & Klein, 2018) [16].

Social media platforms have taken an active role in promoting vaccines during the COVID-19 pandemic. It has been observed that a major portion of social media users is youths and these sites have been used for influencing them toward vaccination of themselves as well as their family. Thus, social media sites have the potential to influence positive practices among youth and have reinforced vaccination by reaching those (Benis, Seidmann & Ashkenazi, 2021) [17].

• Role of Social Media in Pharmaceutical Marketing

Social media platforms have become inevitable for business and marketing in the contemporary era. Considering the advantages and opportunities of these sites, pharmaceutical organisations have been more focused on integrating these sites into their marketing approaches. Consequently, social media platforms allow users to share knowledge and content on different aspects, which has a major influence on attracting consumers, especially millenials of the contemporary era (Silvia, 2019) [18].

In this context, pharmaceutical organisations spend a significant amount on advertising and business promotions via social media platforms. The data included in Paper 1 indicates that around 90% of total digital media users are young adults and these people prefer to discuss medication and health practices on social media platforms. These are the main activities associated with social media platforms that influence the youth and regarding this, business organisations use social media platforms (Moran, Muzellec & Johnson, 2020) [19].

The increasing use of social media has posed both positive as well as negative impacts on users. Regarding this, it has become vital to consider both impact and influence of social media as most of the audience has been focused on depending on these sites for their health and medical preferences. This emergence has also led to the development of crucial challenges including consumer acquisition and business goal achievement and has also provided with an effective competitive advantage (Venkateswaran, Ugalde & Gutierrez, 2019) [20].

In addition, considering the increasing competition in the contemporary business market, pharmaceutical organisations have to ensure sharing of reliable and accurate information with customers in order to build trust and loyalty among consumers. These organisations can also focus on keeping a track record of the progress of these activities to measure the effectiveness of the marketing approaches for achieving the business goal. It has been observed that the integration of digital media helps to upgrade business model innovation (Li, 2020) [21].

The emergence of social media platforms has also expanded the user base of leading sites, including Facebook and Twitter. Additionally, this increased user base has influenced criticising and developing debates on various issues associated with pharmaceuticals, drugs or fossil fuel industries. These platforms have taken a major role in shaping debates and controversial aspects by influencing the preference and perceptions of the audience (Bruns, 2019) [22].

Social media content contains both positive and negative influences on public responses and directly impacts users' sentiments. It has been observed that social media content containing positive messages helps users to address logic, while negative messages influence using emotions. Therefore, social media can influence the audience's decision regarding HPV vaccination (Teoh, 2019) [23].

In Paper 1, a primary quantitative approach has been followed for gathering relevant and reliable data associated with the research phenomenon. In addition, the IBM SPSS software has been used for analysing and interpreting the outcomes. The outcomes indicate that a major portion of respondents prefers to consult a doctor than visit medical stores for their personal medical needs.

In this regard, it can be stated that the significance of medical stores has decreased in recent years, while patients have been more focused on communicating with doctors and medical practitioners. Apart from this, the results have disclosed that most of the people who responded to the survey prefer using social media sites for their pharmaceutical needs. Utilising social media helps to gain relevant data and insights associated with healthcare practices and activities (Arigo et al. 2018) [24].

In recent years, the significance of social media platforms and associated marketing approaches has emerged rapidly. In addition, the content and features of these sites attract users and have also influenced their division-making. Social media sites consist of various effective features and advantages that are vital for both healthcare professionals and consumers and patients. Therefore, it can be stated that these sites have become more vital for pharmaceutical marketing than pharmaceutical stores across countries (Demant et al. 2019) [25].

Apart from this, social media platforms allow consumers to search for their intended products and services which are comparatively easy and flexible for the audience to access and gain their designed services. Purchasing medical products through online marketing has gained huge popularity in recent years and consumers are also highly satisfied with the quality and standard of these products. eWOM has been identified to be the main tool influencing consumers' purchasing intention (Erkan & Evans, 2018) [26].

These sites help users to gain relevant and reliable information associated with medical practices and medications as well as influencing their purchasing decisions. In addition, social media enables users to access various tools and services along with providing discounts and various offers. Thus, these platforms have been emerged as alternatives to traditional medical stores in the contemporary era and organisations use influencers to attract customers (Lou & Yuan, 2019) [27].

• Pharmaceutical Digital Marketing Strategy

According to paper 1, technological innovation is a continuous process and it allows the intervention process in a rapid way to modify the target goal. In order to secure the further growth of the pharmaceutical industry with the association of social media platforms, the process requires the adoption of new and modern technology to make it more flourish and active performance. Integration of technological innovation has provided various effective opportunities to business organizations (Kelly et al. 2021) [28].

The author also mentioned that with the adoption of modern and new technology, the pharmaceutical marketing process can be able to gain a remarkable profit margin to secure its business competitiveness. Healthcare consumers have been identified to prefer social media sites for maintaining health communications (Wong et al. 2021) [29].

Along with this, the digital marketing process has the advantage of cost-effectiveness that supported dealers, manufacturers, doctors, and also patients. Providing any kind of information or discounts have become easy with social media platforms for the pharmaceutical industry that also become flexible to create interest among patients and other customers to stay connected (Stellefson et al. 2020) [30].

The author here makes a statement that social media platforms are one of the effective media that help the pharmaceutical industry to make a huge transformation in its business system. Implementation of digital marketing strategy in the medical process allows customers to purchase medicines and services online and this have been identified to consist of both positive and negative implications (Meier & Reinecke, 2021) [31].

Along with this the author also observed that besides the pharmaceutical industry, other existing industries also focus on the adoption of digital marketing processes to make the business process flexible and easy. In addition, providing reports and even appointing any doctor also has become possible with digital platforms (Bharskar & Siddheshwar, 2020) [32] The purpose of this paper is to increase the awareness of technology and convergence of digital marketing to make it clear that it how can be proved useful for the pharmaceutical industry. In addition to that, the author also stated that bringing innovation in any business is capable of drawing the attention of the customers and digital platform is playing the key role in it (Erlangga, 2022) [33]

> Paper 2

• Role of the Pharmaceutical Sector

According to paper 2, the pharmaceutical industry has made tremendous growth in this recent era with the collaboration of social media techniques. The pharmaceutical industry has developed its brand value and margin by creating a brand strategy. It also has been observed that the emergence of social media has provided an exclusive opportunity to improve branding (Scolere, Pruchniewska & Duffy, 2018) [34].

The sector of pharmaceutical ensures a healthy and safe atmosphere to serve the patient a better motive to live. Due to improving the quality of life and life expectancy, the role of pharmaceuticals cannot be ignored. The main desire of the pharmaceutical sector is to design a quality product and deliver better performance to secure healthcare along with enhancing sustainability (Narayana, Pati & Padhi, 2019) [35].

In this regard, it can be mentioned that most of the pharmaceutical markets are trying to expand to gain more profit margin. Thus, the industry also contributed a little profit amount to the individual country's GDP. In order to fulfill this target, the pharmaceutical sectors are adopted several types of business strategies (Basha et al. 2020) [36]

The author here makes a statement that "some multinational pharmaceutical sectors are taking the strategic approach to make innovation by shaping the system of the business market". The multinational pharmaceutical company follows specific policies, expertise, and funding process through the collaboration of high technology to modify the business growth and structure (Robaczewska, Vanhaverbeke, & Lorenz, 2019) [37]

Impact of Social Media Techniques on Pharmaceutical Marketing

In paper 2, the author has observed that social media has captured a large portion of the current lifestyle of people across the world. It has played a great role to make a positive support in making a vast promotional activity. Accompanied by the invention of modern technology, the lifestyle of people has become transformed. Growing sustainability concerns have also influenced people to shape their lifestyle (Welch & Southerton, 2019) [38].

Depending on this fast-growing lifestyle, the association of social media platforms has a tremendous impact. However, it has proved useful in the medicinerecalling process. In addition to that, getting reviews regarding any medicines has become possible with the platform and people also can provide their opinion regarding the research topic. Facebook has been identified to be the main medium for marketing and advertising of business organisations (Abuhashesh et al. 2021) [39].

In this article, the journalist stated that social media is playing a great role in influencing the practice of the pharmaceutical industry. Thus the pharmaceutical industry recently entered into this modern technological approach to make a wide change. The social media marketing arena has a widespread and can welcome a new marketing trend. It is the process of direct consumer advertisement and also customers are able to give their opinions at the same phrase (Willis & Delbaere, 2022) [40]

The author pointed out in this article that during the pandemic situation, the purchase or delivery process of medicine has become impossible. In that situation, social media platforms played a vital role to make the continuation of the procedure of purchase and delivery of medicines. In order to make healthy communication with the pharmaceutical sector in the modern era, social media is one of the easy and flexible mediums (Schillinger, Chittamuru & Ramírez, 2020) [41]

• Theoretical Framework

According to paper 2, the author has mentioned that to understand the process of social media marketing in the process of business of the pharmaceutical industry, the "*Marketing Equities Theory*" has been identified as beneficial. This theory is effective to recognise the positive effect of the social media marketing procedure. Additionally, the main approach of this theory involves promoting the brand level and improving the brand equity of organisations (Theurer et al. 2018) [42].

In addition to that, modifying the communication process between the industry and its customer, following the strategy of this theory has been proven effective and simple. The author stated that this theory is also able to concentrate on different perspectives of the social media marketing techniques that are suitable to promote any particular brand or product or service.

The author of this study stated that the "social capital theory" is a useful framework that is able to make people work together. This theory is applicable to setting a specific goal to achieve and is also able to serve the required guideline to make it possible to get. All the functions associated with the leading process of the pharmaceutical sectors can be mentioned and followed with this theory. Describing the norms, trust, values, identity, and key tools of mutual relationships can be marked throughout this specific theory (Dwivedi et al. 2021) [43]

• Opportunities and Challenges in the Pharmaceutical Marketing Process

Based on paper 2, it has been observed that most pharmacists believe that the collaboration of the social media marketing process in the pharmaceutical industry is able to improve the quality of the consumers. In addition, to

that social media platforms and techniques are also able to increase the annual revenue of the pharmaceutical industry to maintain its competitive advantage in this competitive business world. In addition to that, it also has been observed by the author that the pharmaceutical industry is constantly developing its usage of social media platforms to promote its services and products and also to enhance the customer base (Tsoy, Tirasawasdichai & Kurpayanidi, 2021) [44]. Thus, the author has noticed both opportunities and challenges in the pharmaceutical marketing process.

On one hand, based on this collaboration consumers get access to a lot of resources and also get medical advertisements to make sure which product or brand will be beneficial for their well-being. In addition, it is a costeffective process that is constantly improving the manufacturing process. On the contrary, the using technology in social media platforms is not well modified which limited the scope of search but during the pandemic situation social media was became one of a major part of pharmaceutical sectors (Zhou et al. 2021) [45]. The author pointed out based on this article that social media platforms have increased the service quality of the pharmaceutical sector a lot. Thus the author also identified that most people have found a lack of features in the using adaptation in the pharmaceutical sectors or industry. In addition to that, therapeutic development is also identified as another disturbance in the pharmaceutical marketing process with the collaboration of social media techniques (Mahlapuu, Björn, & Ekblom, 2020) [46]

The author desires to highlight in this article that social media platform has transformed the way of the pharmaceutical industry by developing its annual revenue. There are several advantages to social media techniques but it is limited in implementing theoretical computational approaches. In addition to that integrating multi-source data is also a major issue in this technology which bounded the potential growth of the pharmaceutical industry (Jarada, Rokne, &Alhajj, 2020) [47]

Table 1 Researchers' Contribution to Social Media Marketing of the Pharmaceutical Sector							
S. No	Field Of Research	Focus	Outcome	Author			
1	Leadership and digitalisation in pharmaceutical industry	Assessing the influence of leadership and digitalisation on business performance of the pharmaceutical industry	The results of this study have highlighted the importance of digital technology and different leadership practices for encouraging the market performance of the pharmaceutical sector. It has been identified that servant leadership has the potential to influence market performance, while digitalisation or digital leadership consists of a positive and significant effect on business performance of the sector.	Purwanto, (2020) [48]			
2	Contemporary debates of the pharmaceutical sector in the context of social media	Social media and contemporary debates in the pharmaceutical industry	The main focus of this research is to assess the influence of social media platforms on the contemporary pharmaceutical debate regarding vaccination. Consumers' increased focus on using social media sites has influenced and increased this debate.	Numerato et al. (2019) [49]			
3	Changing practices, techniques and activities of the medical sector	Emphasising the influence of social media in changing the medical practices and activities	It has been identified that medical blogs provide significant opportunities for patients and medical service providers. Apart from this, including case studies in these blogs and social media posts helps patients to contrast with their issues and access required services.	Terrasse, Gorin&Sisti, (2019) [50]			
4	Social media advertising in the pharmaceutical industry	Identification of the main factors influencing consumers' purchasing intention regarding pharmaceutical products	In this study, E-WOM or electronic word of mouth has been identified to be the main tool influencing consumers toward purchasing pharmaceutical products. Additionally, the main factors leading consumers' purchase intentions are collaborating with friends and features for sharing information and content.	Mekawie& Hany, (2019) [51]			

III. NEW RELATED ISSUES

	Table 2 Social Media Sites Influencing Pharmaceutical Marketing						
S. No	Field of Research	Focus	Outcome	Author			
1	Influence of pharmaceutical marketing via social media	Impact of social media on developing pharmaceutical marketing during the COVID-19 pandemic	Importance of social media in advertising pharmaceutical business across the globe Impact of social media on spreading awareness about the pandemic Influencing people to take the advantage of e- pharma products and purchase them online	(Habes, et al. 2019) [52]			
2	Impact of digital media on international pharmaceutical marketing procedures	Impact of digital platforms and international pharmaceutical marketing procedures	Analyse and understand the basic concept of international marketing Understand the procedures of regular pharmaceutical business Analyse the impact of the internet, smartphones and digital media in recent times Impact of digital media in advertising the international pharmaceutical marketing	(Sheth, 2020) [53]			
3	Digital marketing gained focus during the pandemic through different online platforms	Understanding the basic concept of digital marketing through different social media platforms	Understanding the concept of digital marketing and establishing a clear concept of the procedures of advertisement procedures of digital marketing Analyse the role of social media in understanding the basic need for products of an individual customer Evaluating the role of social media in improving digital marketing procedures The impact of social media in influencing people to purchase products and the role of social media in establishing changes in customer's buying behaviours	(Mason,Narcum& Mason,2021) [54]			
4	Issues of social media in developing effective online pharmaceutical marketing	Identifying different issues of social media and its negative impact on developing e-pharma marketing	Evaluation of different negative factors associated with social media and its excessive usage across the whole world Understanding the basic concept of social networking services and the negative factors that affect social networking services negatively Understanding the analytics of social media and to understand the negative factors that disrupt the establishment of online pharmaceutical marketing	(Abkenar, et al. 2021) [55]			
5	Exploration of social media apps for accessing medicines and drugs from e- pharma marketing	Impact of social media apps to access different medicines and drugs through e- pharma sites available in inline sources and different social media apps	Understanding the demographic patterns of using social media apps in different countries across the globe The impact of diversification of social media in different online applications The importance of social media in accessing medicines from online sources The emergence of new changes in pharmaceutical marketing through implementing digital marketing procedures in it Evaluation of different new pharmaceutical marketing strategies and establishing a better understanding of the access procedures of medicines and drugs through different online social media applications across the whole world	(Moyle, et al. 2019) [56]			

Table 2 Social Media Sites Influencing Pharmaceutical Marketing

Current Status

In this digital era, pharmaceutical businesses are evolving with new dimensions as the businesses are emerging with e-commerce and social media having vast access to different businesses across the globe which has positively improved the business sectors of the country (Festa et al. 2021) [57]. Social media helps to improve the pharmaceutical businesses of a country through digital marketing procedures, in recent times.

Ideal Solution, Desired Status, And Improvements Required

In this study, all the aspects of the pharmaceutical business and the social media marketing process have been evaluated in a detailed manner (Boyd & Koles, 2019) [58]. However, there are some gaps associated with the negative impact of social media functioning on the pharmaceutical business in different countries. Further researchers can concentrate on the negative factors of social media impacting pharmaceutical sectors and evaluate their studies in a detailed manner to provide a better understanding of digital marketing procedures of the whole world.

➢ Research Gap

In this digital era, marketing strategies have changed over time and every business sector of an individual country is relying upon digital marketing procedures, in recent times. The review of the study has shown a clear connection between social media and digital marketing which impactfully helps to improve the pharmaceutical business across the globe but the researcher does not concentrate on the negative impacts of social media that can negatively impact the digital marketing procedure of pharmaceutical sectors which remains ad a major research gap of this study.

> Research Agenda

The prime aim of this study is to understand pharmaceutical marketing procedures and the impact of social media in improving these marketing procedures in this digital era. This study focuses on the structure of pharmaceutical marketing procedures and the marketing techniques of social media in recent times, to improve the productivity of the business in different effective ways.

- The main purpose of this study is to understand the basic concept of the pharmaceutical business and the functioning of this sector.
- Another important purpose of this study is to evaluate the different perspectives of digital marketing to conduct proper e-pharma marketing across the globe.
- Besides that, the aim of this study is to analyse the costeffectiveness of digital marketing to understand the effectiveness of e-pharma business procedures.

➤ Analysis of the Research Agenda

There are many other research studies conducted on the same phenomenon of this study but the methodologies have varied.

• This Research has been Taken up to Analyse in Detail Regarding The

- ✓ Perspectives of social media in utilising e-pharma marketing in a country
- ✓ Role and experience of social media techniques in pharmaceutical marketing
- ✓ The cost-effectiveness of digital marketing in the pharmaceutical business and the impact of social media in increasing the sales rates of e-pharma marketing.

> Research Proposal

It has been determined that additional work has to be done in order to improve the condition of e-pharma marketing procedures with the help of social media. Thus, this study focuses on examining the different techniques of digital marketing which positively improve the marketing process of the e-pharma business. Besides that, this study aims to focus on the impact of social media in developing epharma marketing by implementing digital marketing procedures in the business to improve the business in the global market.

• Proposed Title

Functioning procedures of digital marketing in developing e-pharma marketing with the help of social media

- *Target* Respondents
- Objectives
- ✓ To understand the concept of pharmaceutical marketing procedures
- ✓ To identify different social media techniques in developing the pharmaceutical marketing process
- ✓ To find out the different issues related to digital marketing

IV. ABCD LISTING

ABCD is a four-letter acronym that stands for *Advantages, Benefits, Constraints* and *Disadvantages* and this analysis creates a systematic matrix that handles all the variables of the study by evaluating the core challenges and finding vital aspects based on these four restrictions (Ferreira et al. 2021) [59].

- > Advantages
- Social media enables pharmacists to bring attention to their brand and work.
- Social media allows the profession to highlight and showcase the values of pharmaceutical marketing in this digital era (Naslund et al. 2020) [60].
- In this digital era, through e-pharma marketing procedures people are able to access their medicines without any risks.
- There are virtuous online applications available in recent times which give more access to people to get their medicines from any online source though with the help of digital marketing (Kraus et al, 2021) [61].

- Digital marketing of pharmaceutical business has given access to the people and people are now establishing pharmaceutical businesses in private locations.
- New technologies used in digital marketing procedures provide more safety than in previous years.
- The drug trade has increased in recent times with enthusiasm.
- The cost-effectiveness of e-pharma marketing has increased over previous years and has changed the dimension of the pharmaceutical business across the globe (Kim et al. 2020) [62].

➢ Benefits

- The usage of social media helps advertise the company which helps individual pharmaceutical organisations and stores to connect with people from different countries of the whole world (Merkuryeva, Valberga & Smirnov, 2019) [63].
- Different techniques of digital marketing help the pharmaceutical business to emerge with new changes and acquire additional knowledge about marketing strategies.
- During the pandemic situation there was a lockdown in every country and in that time e-pharma marketing gained importance consumers started to order medicines from online platforms and suggested others through different online platforms which has positively increases consumer engagement in e-pharma marketing (Zheng et al. 2021) [64].
- During the pandemic situation people depended on online platforms and social media platforms to access their daily needed things and medicines one major part of social media have advertised different e-pharma businesses which impactfully improve the marketing of pharmaceutical business in a digital process (Grewal et al. 2020) [65].

Constraints

- There are some limitations of this study such as, the researcher has only evaluated factors that are associated with the digital marketing of pharmaceutical business and the impact of social media in this business and thus, they failed in providing different other aspects that are associated with the pharmaceutical business in recent times (Krishen et al. 2021) [66].
- This study only focuses on the digital marketing of the pharmaceutical business whereas access to different drugs that are not meant for everyone has not been evaluated throughout the study because of the limitations of this research study.
- This study has mentioned the importance of social media in establishing an e-pharma business in a country but the researcher does not mention the negative impact of social media in recent years such as fraud, delivering wrong medicines, stealing personal information and many others which sometimes led a person to their death (Nourani et al. 2020) [67.
- Disruptions in marketing procedures can significantly harm a person's health and rapid access to illicit drugs

can create chaotic situations among the pharma businesses the consequences of wrong medicines and drugs are harmful to human health especially, for aged persons and children of an individual country (Flynn et al. 2021) [68].

> Disadvantages

- There are many disadvantages of e-pharma marketing procedures as it includes social media and social media has a negative impact on human beings (Pulido et al. 2020) [69].
- People have more access to medicines and drugs that are not meant for everyone.
- Sometimes some advertisements influence people in buying that medicine which is not necessary for them and sometimes the human body refuses to cope with those medicines which disrupt the metabolism system of the human body and the person faces several health issues (Suarez-Lledo & Alvarez-Galvez, 2021) [70].
- in this digital era, with advanced technologies e-pharma businesses are established in almost every country of the whole world but many e-pharma platforms do not require prescriptions for buying medicine and thus people can access those medicines and drugs that are not meant for everyone.
- Social media was a major leading medium of communication and advertising medium of many businesses which impactfully increases many businesses to reach its goal but many businesses face frauds and disruptions and in digital pharmaceutical businesses there are many people who have faced disruptions regarding e-pharma business such as the delivery of wrong medicine, late delivery of medicines, fraud bank transactions and many others (Jahanbakhshi et al. 2021) [71].

V. FINDINGS

Throughout this entire discussion analysis it has been found that the majority of the people has become satisfied with the work process of pharmaceutical stores.

- According to the majority of the people, pharmaceutical stores are now becoming more active and flexible to meet their needs.
- The collaboration of social media platforms has been identified to be highly influential for attracting young adults (Mayrhofer et al. 2020) [72].
- Social media platforms are able to make the work process of pharmaceutical stores more secure to be sustained for a long-term issue.
- Some people also believe that digital marketing techniques did not sustainable and also not capable of improving the coordination of sales by stocks.
- Digital marketing process is helpful for its costeffectiveness, which is profitable for sale procedures and involves digital technologies (Desai & Vidyapeeth, 2019) [73].

- Some people also believe digital media can be proved hectic for the pharmaceutical industry as it requires proper management and observation on a daily basis.
- Accompanied by a modern as well as high level of technology the business process of the pharmaceutical industry resulted best in the global business market.
- Providing reviews and opinions regarding any disease or medicine has become easy with digital marketing techniques and platforms.

VI. SUGGESTIONS

- In order to run the pharmaceutical industry with the collaboration of social media platforms, it needs a proper and appropriate high level of technology.
- Improving business strategy is another requirement to continue the business process of the pharmaceutical industry with digital marketing techniques.
- Decreasing the price of medicines and products and incorporating six sigma practices can help to improve business performance of pharmaceutical organisations (Kartika et al. 2020) [74].
- Providing discounts and offers with medical products and services are also beneficial to create an interest among propel to make a purchase decision.
- Raising awareness among people about the flexibility of social media platforms and their fast process of purchasing can increase the buying rate to influence the income status of the pharmaceutical industry.
- Knowing the target customers is very important in running any business and also identifying the internet users to make them connected their needs proper business planning.
- Using digital platforms needs to add some more valuedriven content to make the entire business process profitable and sustainable.
- Accompanied by increasing competency with an effective marketing strategy the digital marketing process can secure further growth of business organisations in this competitive business world (Agung & Darma, 2019) [75].

VII. CONCLUSIONS

In this study, all the necessary aspects of e-pharma marketing and the impact of implementing digital marketing procedures in the pharmaceutical business have been evaluated in a detailed manner. Besides that, another major focus of the study is the usage of social media in developing the e-pharma business in different countries and the impact of social media on this business has been evaluated in a detailed manner. In the concluding part of this study, it can be seen that there are many positive and negative impacts of the e-pharma business and due to lack of knowledge in digital techniques, lack of productivity, lack of concerns and other various reasons for which the businesses have to face challenging situations while establishing the business in a country. Considering all the factors, it can be stated that epharma marketing is a steady and sustainable effort to be successful and achieve profit margins in the pharmaceutical business all across the world.

REFERENCES

- [1]. Infante, A., & Mardikaningsih, R. (2022). The Potential of social media as a Means of Online Business Promotion. *Journal of Social Science Studies (JOS3)*, 2(2), 45-49. https://ejournal . metromedia.education/index.php/jos3/article/downloa d/26/26
- [2]. Cartwright, S., Davies, I., & Archer-Brown, C. (2021). Managing relationships on social media in business-to-business organisations. *Journal of Business Research*, 125, 120-134. https://strathprints.strath.ac.uk /83714/1/ Cartwrite _etal_JBR_2020_Managing_relationships_on_social_ media_in_business_to_business.pdf
- [3]. Kamath, T., & Neermarga, P. Social Media Marketing in the Pharmaceutical Sector: Opportunities and Challenges in Mangalore City Area. https://ijisrt.com/assets/upload/files/IJISRT22SEP313 _(1).pdf
- [4]. Mohajan, H. K. (2020). Quantitative research: A successful investigation in natural and social sciences. *Journal of Economic Development, Environment and People*, 9(4), 50-79. https://mpra.ub.uni-musenchen. de/105149/ 1/MPRA _paper_105149.pdf
 [5]. Thorman, A., Engle, A., Brintz, B., Simmons, R. G.,
- [5]. Thorman, A., Engle, A., Brintz, B., Simmons, R. G., Sanders, J. N., Gawron, L. M., ... & Kaiser, J. E. (2022). Quantitative and qualitative impact of One Key Question on primary care providers' contraceptive counseling at routine preventive health visits. *Contraception*, 109, 73-79. https://www.sciencedirect.com/science/article/pii/S00 10782422000038
- [6]. Schneider, D., & Harknett, K. (2022). What's to like? Facebook as a tool for survey data collection. Sociological Methods & Research, 51(1), 108-140. https://journals.sagepub.com/doi/pdf/10.1177/004912 4119882477
- [7]. HR, G., & Aithal, P. S. (2022). Why is it Called Doctor of Philosophy and Why Choosing Appropriate Research Philosophical Paradigm is Indispensable During Ph. D. Program in India?. *International Journal of Philosophy and Languages (IJPL)*, 1(1), 42-58.

https://papers.ssrn.com/sol3/papers.cfm?abstract_id= 4263406

[8]. Atmowardoyo, H. (2018). Research methods in TEFL studies: Descriptive research, case study, error analysis, and R & D. *Journal of Language Teaching* and Research, 9(1), 197-204. http://academypublication.com/issues2/jltr/vol09/01/2 5.pdf

- [9]. Walter, D., & Ophir, Y. (2019). News frame analysis: inductive mixed-method An computational approach. Communication Methods and Measures, 13(4), 248-266. https://www.researchgate .net/profile/Yotam-Ophir 3/publication/ 335867777 _A_Multimethod_Approach_for_Identifying_and_Gr ouping_Frame_Elements_with_Topic_Modeling_and Network Analysis/links/5f0c8254a6fdcc2f323376aa /A-Multi-method-Approach-for-Identifying-and-Grouping-Frame-Elements-with-Topic-Modelingand-Network-Analysis.pdf
- [10]. Aceto, G., Persico, V., & Pescapé, A. (2018). The role of Information Communication and Technologies in healthcare: taxonomies, perspectives, and challenges. Journal of Network and Computer Applications, 107, 125-154. https://www .research gate.net/profile/ValerioPersico/publication/32301519 2 The role of Information and Communication Te chnologies in Healthcare Taxonomies Perspectives and Challenges/links/5a85a545aca272017e560d7a/ The-role-of-Information-and-Communication Technologies-in-Healthcare-Taxonomies-Perspectives-and-Challenges.pdf
- [11]. Gioumouxouzis, C. I., Karavasili, C., & Fatouros, D. G. (2019). Recent advances in pharmaceutical dosage forms and devices using additive manufacturing technologies. *Drug discovery today*, 24(2), 636-643. http://ikee.lib.auth.gr/record/307759/files/RecentAdv ances.pdf
- [12]. Puetz, J., &Wurm, F. M. (2019). Recombinant proteins for industrial versus pharmaceutical purposes: a review of process and pricing. *Processes*, 7(8), 476. https://www.mdpi.com/2227-9717/7/8/476/pdf
- [13]. González Peña, O. I., López Zavala, M. Á., & Cabral Ruelas, H. (2021). Pharmaceuticals market, consumption trends and disease incidence are not driving the pharmaceutical research on water and wastewater. *International journal of environmental research and public health*, 18(5), 2532. https://www.mdpi.com/1660-4601/18/5/2532/pdf
- [14]. Gruner, R. L., & Power, D. (2018). To integrate or not to integrate? Understanding B2B social media communications. *Online Information Review*, 42(1), 73-92.https://research.rug.nl/files/76350989/ OIR_04 _ 2016_0116.pdf
- [15]. Aloweidi, A., Bsisu, I., Suleiman, A., Abu-Halaweh, S., Almustafa, M., Aqel, M., ... & Obeidat, H. (2021). Hesitancy towards covid-19 vaccines: An analytical cross–sectional study. *International Journal of Environmental Research and Public Health*, 18(10), 5111.https://www.mdpi.com/16604601/18/10/5111/ pdf.
- [16]. Chou, W. Y. S., Oh, A., & Klein, W. M. (2018). Addressing health-related misinformation on social media. *Jama*, 320(23), 2417-2418. http://www.zdrav .by/pdf/1152.pdf.
- [17]. Benis, A., Seidmann, A., & Ashkenazi, S. (2021). Reasons for taking the COVID-19 vaccine by US social media users. *Vaccines*, 9(4), 315. https://www.mdpi.com/2076-393X/9/4/315/pdf.

- [18]. Silvia, S. (2019). The importance of social media and digital marketing to attract millennials' behavior as a consumer. *Marketing*, 4(2).https://www.researchgate. net/profile/SarahSilvia/publication/335517333_The_I mportance_of_Social_Media_and_Digital_Marketing _to_Attract_Millennials'_Behavior_as_a_Consumer/l inks/5d70be2d4585151ee49e5ace/The-Importance of-Social-Media-and-Digital-Marketing-to-Attract-Millennials-Behavior-as-a-Consumer.pdf
- [19]. Moran, G., Muzellec, L., & Johnson, D. (2020). Message content features and social media engagement: evidence from the media industry. Journal Product Brand ofx Management, 29(5), 533-545. https://mural.maynoothuniversity.ie/13927/1/GM_me ssage.pdf
- [20]. Venkateswaran, R., Ugalde, B., & Gutierrez, R. T. (2019). Impact of social media application in business organizations. *International Journal of Computer Applications*, 975(8887), 5-10. https://www.researchgate.net/profile/BernardUgalde/ publication/334522925_Impact_of_Social_Media_Ap plication_in_Business_Organizations/links/5eb07319 a6fdcc7050a8d6ec/Impact-of-Social-Media-Application-in-Business-Organizations.pdf
- [21]. Li, F. (2020). The digital transformation of business models in the creative industries: A holistic framework and emerging trends. *Technovation*, 92, 102012.

https://openaccess.city.ac.uk/id/eprint/18730/1/

- [22]. Bruns, A. (2019). After the 'APIcalypse': Social media platforms and their fight against critical scholarly research. *Information, Communication & Society*, 22(11), 1544-1566. https://snurb.info /files/2019/After%20the%20%27 APIcalypse%27.pdf
- [23]. Teoh, D. (2019). The power of social media for HPV vaccination-not fake news!.*American Society of Clinical Oncology Educational Book*, 39, 75-78. https://ascopubs.org/doi/pdfdirect/10.1200/EDBK_23 9363
- [24]. Arigo, D., Pagoto, S., Carter-Harris, L., Lillie, S. E., & Nebeker, C. (2018). Using social media for health research: Methodological and ethical considerations for recruitment and intervention delivery. *Digital health*, 4, 2055207618771757. https://journals.sagepub.com/doi/pdf/10.1177/205520 7618771757
- [25]. Demant, J., Bakken, S. A., Oksanen, A., & Gunnlaugsson, H. (2019). Drug dealing on Facebook, Snapchat and Instagram: A qualitative analysis of novel drug markets in the Nordic countries. *Drug and alcohol review*, 38(4), 377-385. https://trepo.tuni.fi/bitstream/handle/10024/115882/dr ug_dealing_on_facebook_2019.pdf?sequence=2
- [26]. Erkan, I., & Evans, C. (2018). Social media or shopping websites? The influence of eWOM on consumers' online purchase intentions. *Journal of Marketing Communications*, 24(6), 617-632. https://discovery.ucl.ac.uk/id/eprint/ 1499864/1/Erkan%20and%20Evans%202016%20Soc ial%20media%20or%20shopping%20websites.pdf

- [27]. Lou, C., & Yuan, S. (2019). Influencer marketing: How message value and credibility affect consumer trust of branded content on social media. *Journal of interactive* advertising, 19(1), 58-73. https://doi.org/10.1080/15252019.2018.1533501
- [28]. Kelly, B., Papanikolaou, D., Seru, A., & Taddy, M. (2021). Measuring technological innovation over the long run. American Economic Review: Insights, 3(3), 303-320. https://www.nber.org/system/ files/working _papers /w25266/w25266.pdf
- [29]. Wong, A., Ho, S., Olusanya, O., Antonini, M. V., & Lyness, D. (2021). The use of social media and online communications in times of pandemic COVID-19. *Journal of the Intensive Care Society*, 22(3), 255-260.

https://journals.sagepub.com/doi/pdf/10.1177/175114 3720966280

- [30]. Stellefson, M., Paige, S. R., Chaney, B. H., & Chaney, J. D. (2020). Evolving role of social media in health promotion: updated responsibilities for health education specialists. *International journal of environmental research and public health*, 17(4), 1153. https://www.mdpi.com/1660-4601/17/4/1153/pdf
- [31]. Meier, A., & Reinecke, L. (2021). Computermediated communication, social media, and mental health: A conceptual and empirical metareview. *Communication Research*, 48(8), 1182-1209. https://psyarxiv.com/573ph/download?format=pdf
- Bharskar, G. R., & Siddheshwar, S. (2020). Digital Marketing In Pharmaceutical Sector. International Journal of Pharmaceutical Science and Health Care, 2(10), 1-7. https://www.researchgate.net/profile/Ganesh-Bharskar/publication/339792976_DIGITAL_MARK ETING_IN_PHARMACEUTICAL_SECTOR/links/6 06dcc27a6fdcc5f778c6587/DIGITAL-MARKETING-IN-PHARMACEUTICAL-SECTOR.pdf
- [33]. Erlangga, H. (2022). Pharmaceutical Business Competition in Indonesia: A Review. Sys Rev Pharm 2020, 11(10),617-623. http://repository.unpas. ac.id /56554/
- [34]. Scolere, L., Pruchniewska, U., & Duffy, B. E. (2018). Constructing the platform-specific self-brand: The labor of social media promotion. *Social Media+ Society*, 4(3),2056305118784768.https://journals.sage pub.com/doi/pdf/ 10.1177/2056305118784768
- [35]. Narayana, S. A., Pati, R. K., & Padhi, S. S. (2019). Market dynamics and reverse logistics for sustainability in the Indian Pharmaceuticals industry. *Journal of cleaner production*, 208, 968-987.https://www.academia.edu/download/86211375/j .jclepro.2018.10.17120220520-1-15w9dkt.pdf
- [36]. Basha, M., Singh, A. P., Rafi, M., Rani, M. I., & Sharma, N. M. (2020). Cointegration and Causal relationship between Pharmaceutical sector and Nifty–An empirical Study. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(6), 8835-8842. https://archives.palarch.nl/index.php/jae/article/downl oad/2331/2299

- [37]. Robaczewska, J., Vanhaverbeke, W., & Lorenz, A. (2019). Applying open innovation strategies in the context of a regional innovation ecosystem: The case of Janssen Pharmaceuticals. *Global Transitions*, *1*, 120-131.https://www.sciencedirect.com/science/article/pii/S258979181930009X
- [38]. Welch, D., & Southerton, D. (2019). After Paris: transitions for sustainable consumption . *Sustainability: Science, Practice and Policy*, *15*(1),31-44. https://www.tandfonline .com /doi/pdf/10.1080/15487733.2018.1560861?needAcce ss=true&role =button
- [39]. Abuhashesh, M. Y., Alshurideh, M. T., Ahmed, A. E., Sumadi, M., & Masa'deh, R. E. (2021). The effect of culture on customers' attitudes toward Facebook advertising: the moderating role of gender. *Review of International Business and Strategy*, *31*(3), 416-437. https://www.researchgate.net/profile/Muhammad-Alshurideh/publication/350668078_The_effect_of_cu lture_on_customers'_attitudes_toward_Facebook_adv ertising_the_moderating_role_of_gender/links/62304 736e32d2203ab4194e7/The-effect-of-culture-on-customers-attitudes-toward-Facebook-advertising_the-moderating-role-of-gender.pdf
- [40]. Willis, E., &Delbaere, M. (2022). Patient influencers: The next frontier in direct-to-Consumer pharmaceutical marketing. *Journal of Medical InternetResearch*, 24(3),e29422.https://www.jmir.org /2022/3/e29422/
- [41]. Schillinger, D., Chittamuru, D., & Ramírez, A. S. (2020). From "infodemics" to health promotion: a novel framework for the role of social media in public health. *American journal of public health*, 110(9),1393-1396.https://ajph. apha publications.org/doi/abs/10.2105/AJPH.2020.305746
- [42]. Theurer, C. P., Tumasjan, A., Welpe, I. M., & Lievens, F. (2018). Employer branding: a brand equity-based literature review and research agenda. *International Journal of Management Reviews*, 20(1),155-179. https://ink.library. smu.edu. sg/cgi/viewcontent.cgi?article=6773&context=lkcsb_research.
- [43]. Dwivedi, Y. K., Ismagilova, E., Rana, N. P., & Raman, R. (2021). Social media adoption, usage and impact in business-to-business (B2B) context: A state-of-the-art literature review. *Information Systems Frontiers*,1-23.https://link.springer.com/article /10.1007 /s 10796-021-10106-y.

- [44]. Tsoy, D., Tirasawasdichai, T., & Kurpayanidi, K. I. (2021). Role of social media in shaping public risk during COVID-19 pandemic: perception А review. International theoretical Journal ofManagement Science and **Business** Administration, 7(2),35-41. https://api.scienceweb. uz/storage/publication_files/93/1839/6227853dd5d74 %D0%9A%D1%83%D1%80%D0%BF%D0%B0% D1%8F%D0%BD%D0%B8%D0%B4%D0%B8%20 %D0%9A%D0%BE%D0%BD%D1%81%D1%82% D0%B0%D0%BD%D1%82%D0%B8%D0%BD%20 %D0%98%D0%B2%D0%B0%D0%BD%D0%BE% D0%B2%D0%B8%D1%87%20International%20Jour nal%20of%20Management%20Science%20and%20B usiness%20Administration%20%D1%8F%D0%BD% D0%B2%D0%B0%D1%80%D1%8C%202021.pdf
- [45]. Zhou, Y., Draghici, A., Abbas, J., Mubeen, R., Boatca, M. E., & Salam, M. A. (2022). Social media efficacy in crisis management: effectiveness of nonpharmaceutical interventions to manage COVID-19 challenges. *Frontiers in psychiatry*, 1732. https://www.frontiersin.org/articles/10.3389/fpsyt.202 1.626134/full
- [46]. Mahlapuu, M., Björn, C., & Ekblom, J. (2020). Antimicrobial peptides as therapeutic agents: Opportunities and challenges. *Critical reviews in biotechnology*, 40(7),978-992. https://www.tandfonline.com/doi/abs/10.1080/07388 551.2020.1796576.
- [47]. Jarada, T. N., Rokne, J. G., & Alhajj, R. (2020). A review of computational drug repositioning: strategies, approaches, opportunities, challenges, and directions. *Journal of cheminformatics*, *12*(1), 1-23. https://jcheminf.biomedcentral.com /articles/10.1186/s13321-020-00450-7
- [48]. Purwanto, A. (2020). Did Servant, Digital and Green Leadership Influence Market Performance? Evidence from Indonesian Pharmaceutical Industry. Evidence from Indonesian Pharmaceutical Industry, 642-653. https://www.academia.edu/download/85796423/didservant-digital-and-green-leadership-influencemarket-performance-evidence-from-indonesianpharmaceutical-industry.pdf
- [49]. Numerato, D., Vochocová, L., Štětka, V., &Macková, A. (2019). The vaccination debate in the "post-truth" era: social media as sites of multi-layered reflexivity. *Sociology of health & illness*, 41, 82-97. https://onlinelibrary.wiley.com/doi/pdfdirect/10.1111/ 1467-9566.12873
- [50]. Terrasse, M., Gorin, M., &Sisti, D. (2019). Social media, e-health, and medical ethics. *Hastings Center Report*, 49(1), 24-33.https://www.researchgate.net/profile/Dominic-Sisti/publication/331303086_Social_Media_E-Health_and_Medical_Ethics/links/5cf7232892851c4d d029f2e2/Social-Media-E-Health-and-Medical-Ethics.pdf

- [51]. Mekawie, N., & Hany, A. (2019). Understanding the factors driving consumers' purchase intention of over the counter medications using social media advertising in Egypt:(A Facebook advertising application for cold and Flu products). *Procedia Computer Science*, 164, 698-705. https://www.sciencedirect.com/science/article/pii/S 1877050919322859/pdf?md5=c10cca8f11a9e0d3045 a1ca12641feed&pid=1-s2.0-S1877050919322859main.pdf
- [52]. Habes, M., Alghizzawi, M., Ali, S., SalihAlnaser, A., &Salloum, S. A. (2020). The Relation among Marketing ads, via Digital Media and mitigate (COVID-19) pandemic in Jordan. *International Journal of Advanced Science and Technology*, 29(7), 12326-12348. https://www.researchgate .net/profile/ Mohammed-Habes/publication/342735833 _The_ Relation_among_Marketing_ads_via_Digital_Media_ and_mitigate_COVID_19_pandemic_in_Jordan/links /5f043d07a6fdcc4ca452f706/The-Relation-among-Marketing-ads-via-Digital-Media-and-mitigate-COVID-19-pandemic-in Jordan.pdf
- [53]. Sheth, J. N. (2020). Borderless media: Rethinking international marketing. *Journal of International Marketing*,28(1),3-12. https://journals. sagepub.com/doi/pdf/10.1177/1069031X19897044.
- [54]. Mason, A. N., Narcum, J., & Mason, K. (2021). Social media marketing gains importance after Covid-19. Cogent Business & Management, 8(1), 1870797.https://www.tandfonline.com/doi/full/10.10 80/23311975.2020.1870797
- [55]. Abkenar, S. B., Kashani, M. H., Mahdipour, E., &Jameii, S. M. (2021). Big data analytics meets social media: A systematic review of techniques, open issues, and future directions. *Telematics and informatics*,57,101517.https://www.sciencedirect.co m/science/article/pii/S0736585320301763
- [56]. Moyle, L., Childs, A., Coomber, R., & Barratt, M. J. (2019). # Drugsforsale: An exploration of the use of social media and encrypted messaging apps to supply and access drugs. *International Journal of Drug Policy*,63,101-110.https://www.sciencedirect.com /science/article/abs/pii/S0955395918302111
- [57]. Festa, G., Rossi, M., Kolte, A., & Marinelli, L. (2021). The contribution of intellectual capital to financial stability in Indian pharmaceutical companies. *Journal of Intellectual Capital*, 22(2), 337-359. https://www.emerald.com /insight/content /doi/10.1108/JIC-03-2020-0091/full/html
- [58]. Boyd, D. E., & Koles, B. (2019). Virtual reality and its impact on B2B marketing: A value-in-use perspective. *Journal of Business Research*, 100, 590-598.https://www.sciencedirect.com/science/article /abs/pii/S0148296318302947
- [59]. Ferreira, R., Pereira, R., Bianchi, I. S., & da Silva, M. M. (2021). Decision factors for remote work adoption: advantages, disadvantages, driving forces and challenges. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), 70. https://www.mdpi.com/2199-8531/7/1/70

- [60]. Naslund, J. A., Bondre, A., Torous, J., & Aschbrenner, K. A. (2020). Social media and mental health: benefits, risks, and opportunities for research and practice. *Journal of technology in behavioral science*, 5,245-257. https://link.springer.com /article/ 10.1007/s41347-020-00134-x
- [61]. Kraus, S., Schiavone, F., Pluzhnikova, A., & Invernizzi, A. C. (2021). Digital transformation in healthcare: Analyzing the current state-ofresearch. *Journal of Business Research*, 123, 557-567. https://www.sciencedirect.com /science/article /pii/S0148296320306913
- [62]. Kim, D. D., Silver, M. C., Kunst, N., Cohen, J. T., Ollendorf, D. A., & Neumann, P. J. (2020). Perspective and costing in cost-effectiveness analysis, 1974–2018. *Pharmacoeconomics*, 38, 1135-1145. https://link.springer.com/article/10.1007/s40273-020-00942-2
- [63]. Merkuryeva, G., Valberga, A., & Smirnov, A. (2019). Demand forecasting in pharmaceutical supply chains: A case study. *Procedia Computer Science*, 149, 3-10. https://reader.elsevier.com/reader/sd/pii/S187705091 9301061?token=75F335BA15BB82BE3122F318255 95B181CF34583BD4FCEE48ABE2A964DC65B8A B31BA804A17F30482BEA407E72CBF798&originR egion=eu-west-1&originCreation=20230221110125
- [64]. Zheng, S. Q., Yang, L., Zhou, P. X., Li, H. B., Liu, F., & Zhao, R. S. (2021). Recommendations and guidance for providing pharmaceutical care services during COVID-19 pandemic: a China perspective. *Research in social and administrative pharmacy*, *17*(1),1819-1824. https://www.sciencedirect.com/science/article/pii/S15 51741120302849
- [65]. Grewal, D., Hulland, J., Kopalle, P. K., & Karahanna, E. (2020). The future of technology and marketing: A multidisciplinary perspective. *Journal of the Academy* of Marketing Science, 48, 1-8. https://link.springer.com/article/10.1007/s11747-019-00711-4
- [66]. Krishen, A. S., Dwivedi, Y. K., Bindu, N., & Kumar, K. S. (2021). A broad overview of interactive digital marketing: A bibliometric network analysis. *Journal* of Business Research, 131, 183-195. https://www.sciencedirect.com/science/article/abs/pii/ S0148296321002241
- [67]. Nourani, H., Mohammad Ali Taghavi, S., Latifi, F., & Rashidyani, J. (2020). Biotech's growing activity in the world of social media networking. *Journal of Applied Biotechnology Reports*, 7(3), 135-138. https://eprints.bmsu.ac.ir/8351/1/Biotech%E2%80%9 9s%20growing%20activity%20in%20the%20world% 20of%20social%20media%20networking.pdf
- [68]. Flynn, B., Cantor, D., Pagell, M., Dooley, K. J., & Azadegan, A. (2021). From the editors: introduction to managing supply chains beyond Covid-19preparing for the next global megadisruption. *Journal of Supply Chain Management*, 57(1),3-6. https://onlinelibrary.wiley.com/doi/full/10.1111/jscm.

12254

- [69]. Pulido, C. M., Ruiz-Eugenio, L., Redondo-Sama, G., & Villarejo-Carballido, B. (2020). A new application of social impact in social media for overcoming fake news in health. *International journal of environmental research and public health*, 17(7), 2430. https://www.mdpi.com/1660-4601/17/7/2430
- [70]. Suarez-Lledo, V., & Alvarez-Galvez, J. (2021). Prevalence of health misinformation on social media: systematic review. *Journal of medical Internet research*, 23(1),e17187. https://www.jmir.org /2021 /1/e17187/
- [71]. Jahanbakhshi, A., Abbaspour-Gilandeh, Y., Heidarbeigi, K., & Momeny, M. (2021). Detection of fraud in ginger powder using an automatic sorting system based on image processing technique and deep learning. *Computers in Biology and Medicine*, 136,104764. https://www.sciencedirect.com/science/article/abs/pii/ S0010482521005588

[72]. Mayrhofer, M., Matthes, J., Einwiller, S., & Naderer, B. (2020). User generated content presenting brands on social media increases young adults' purchase intention. *International Journal of Advertising*, 39(1), 166-186.https://www.tandfonline.com/doi/pdf/10. 1080/02650487.2019.1596447

- [73]. Desai, V., & Vidyapeeth, B. (2019). Digital marketing: A review. *International Journal of Trend in Scientific Research and Development*, 5(5), 196-200.https://www.academia.edu/download /90185943/ijtsrd23100.pdf
- [74]. Kartika, H., Norita, D., Triana, N. E., Roswandi, I., Rahim, A., Naro, A., ... & Bakti, C. S. (2020). Six sigma benefit for indonesian pharmaceutical industries performance: a quantitative methods approach. *Systematic Reviews in Pharmacy*, 11(9), 466-473.https://www.academia.edu/download/762 04223/six-sigma-benefit-for-indonesian pharmaceutical-industries-performance-aquantitativemethods-approach.pdf
- [75]. Agung, N. F. A., & Darma, G. S. (2019). Opportunities and challenges of Instagram algorithm in improving competitive advantage. *International Journal of Innovative Science and Research Technology*, 4(1), 743-747. https://ijisrt.com/wpcontent/uploads/2019/03/IJISRT19JA125.pdf